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On the cover: The first cohort of 15 students will graduate this May with a dual degree of MD and ScM in the Primary Care-Population Medicine Program at the Alpert Medical School of Brown University.

[PHOTO: ALPERT MEDICAL SCHOOL OF BROWN UNIVERSITY]



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Deceit, lies and plagiarism in residency applications

EDWARD FELLER, MD, FACP, FACC

DISHONESTY IN SELF-reported academic and non-curricular achievements in medical student applications for residency is widespread and under-recognized. As examples:

- Of 239 applicants to an ophthalmology residency who cited publications, 22 had an unverifiable publication.¹
- In a radiology residency, one-third of applicants' publications claimed as "accepted," or "in press," were not published after two years.²
- Of OB/GYN fellowship applicants claiming Alpha Omega Alpha (AOA) membership, 11% were not found on the AOA website.³

Medical school and the residency Match process are highly competitive. Academic excellence, achievements in non-curricular activities and impressive peer-reviewed publications are important factors in residency decisions. Self-imposed or external pressure to succeed challenge the ethics of medical students.



Why do medical students lie?

Conflicts of interest abound in pressure to get Honors in a clerkship, a coveted faculty recommendation, or publications to improve chances to Match at an elite residency. This motivation can overwhelm ethical behavior, inducing students to pad their resumes while ignoring

or rationalizing their bad behavior. Misconduct may deteriorate gradually, perhaps starting with falsely filling in a missing data point on a manuscript or granting oneself an unearned leadership position in an organization. Some students progress to blatant fabrication, falsification or plagiarism.

Some misconduct is tempting because it is unlikely to be detected and so easily accessible. In a family medicine survey, personal statements submitted by students accounted for more than half of all misrepresentations.⁴ I Googled "pediatrics personal statements" and in a minute unearthed numerous websites offering sample essays and active rewriting or creation of statements. One (www.medfools.com/personal-statements) offered 3 levels of payment (termed "contributions") depending on level of perceived need – \$60.00 for well-written essays by native English speakers to \$95.00 for work needing editing of grammar,

style, format, content and theme.

Application misconduct does not occur in a vacuum. Some students copy other students' course work, divulge Objective Structured Clinical Examination (OSCE) content to peers preparing to take this exam or record "neuro exam normal" when it was not done. Lapses in research integrity by faculty are a parallel professional morass, influencing students who witness or are aware of transgressions. Is it surprising that plagiarism detecting software identified plagiarized faculty letters of recommendation in 11.8% of all student Electronic Residency Application Service (ERAS) applications?⁵ Medical school infrastructure affects student professionalism. Worrisome climates stress competition, careerism, grades, and publications or have unclear or inadequate emphasis on scientific integrity.

Some distortions are not willful, resulting from disorganization, sloppiness or inadequate training or misconceptions of what constitutes plagiarism. Data suggest that students frequently conclude erroneously that plagiarism is absent if they cite the original author or substitute a few words or paraphrase content. Accidental deceit also occurs by misidentification of notes or drafts that are undetected as unedited when cut and pasted from someone else's creative effort.

Who is more likely to cheat?

Individual personality traits linked to a higher likelihood of deceit include arrogance, competitiveness, narcissism, self-entitlement, perfectionism, insecurity about personal competency and impaired self-awareness of personal behavior.⁶ Stress or burnout, common

Table 1. Spectrum of application deceit

Authorship of non-existent articles, journals or presentations
Non-authorship of existing article
False claims – AOA membership, advanced degree
Plagiarism – personal statement
Falsified official documents
Moving self to higher authorship position
Articles listed as "published" when only "submitted"
Abstracts reported as full publication
Fake or inflated role in athletics, organizations, experiences
Undisclosed criminal records

among med students, are linked to ethical lapses.^{7,8} Data indicate that major psychiatric disorders are uncommon sources of misconduct. Yet, some dishonesty is due to anti-social or narcissistic personality disorders or grandiosity of mania. Inadvertent deceit can be related to attention deficit hyperactivity disorder (ADHD) or the impaired attention common in major depression.⁶

Safeguards to protect integrity of the Match

A 2013 Cochrane review concluded that there is sparse evidence that applicants who receive formal research ethics training are less likely to commit ethical breaches.⁹ Anti-plagiarism software for personal statements compares new material to existing content, although robust data on accuracy are lacking. Scanning software cannot detect plagiarized personal statements not available publicly.¹⁰

ERAS now include a space for the unique PubMed identifier (PMID) for

publications. Applicants are asked, but not required, to confirm publications. But, there are no identifiers for submitted, in press or accepted articles or conference presentations. Some residency programs ask or require applicants to provide a hard copy of all articles listed in ERAS. In Great Britain, the Match service screens all applications for plagiarism.

Limitations, inaccuracies in published reports

Criteria for searching databases such as Medline or Google Scholar to confirm authorship are not standardized. In published reports of application distortion, the inability to find some claimed publications is due to incomplete or inadequate search strategies. One program may detect only identical word matches of ≥ 8 consecutive words while another scores on a minimum percentage of plagiarized content (ie, 10%). Misspellings, incomplete citations, word or name changes due to marriage or other reasons may render

legitimate citations impossible to substantiate. Published reports of residency application misconduct use different study methodology, assess incomparable criteria – confined only to candidates invited for interviews or all applicants. Data from one institution or specialty is not generalizable to the entire spectrum of institutions. Anti-plagiarism software cannot detect unattributed duplication of figures, tables or images or identify plagiarism of ideas and concepts. Some of the most comprehensive searches detect malfeasance in only a small percentage of applications.¹¹

Academic dishonesty contaminates the residency Match, threatening its integrity. Instruction about plagiarism is vital. Although deliberate intent is difficult to assess, conscious misrepresentation of academic credentials, research productivity and non-academic accomplishments is probable in as many as 5 to 10% of submitted applications.¹² ❖

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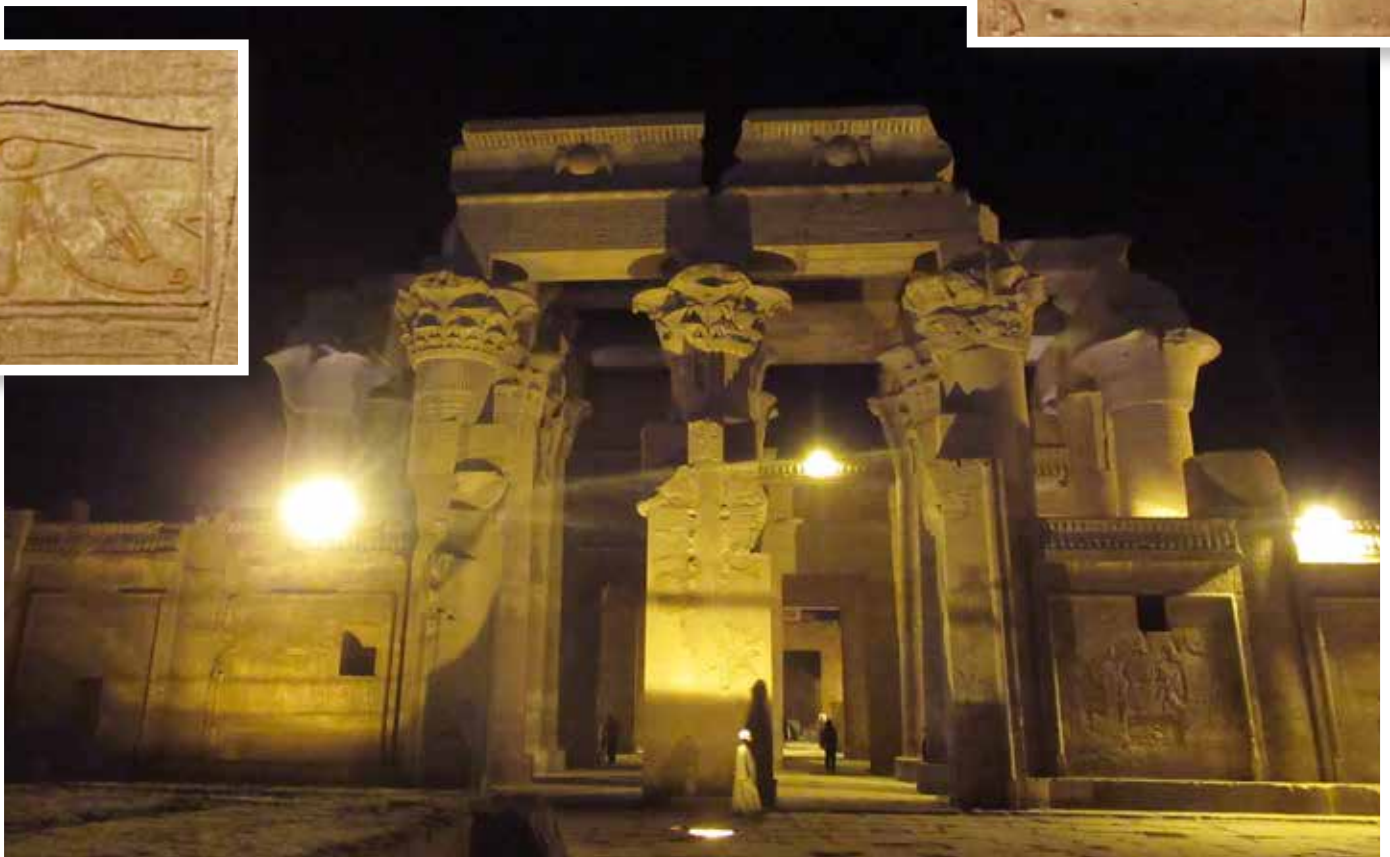
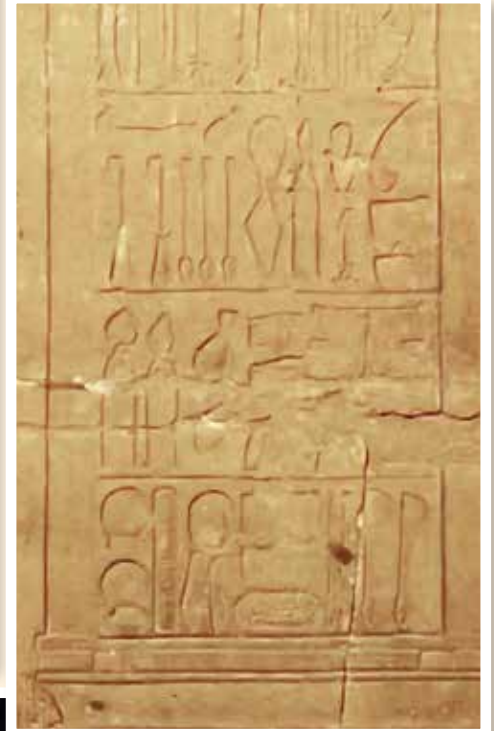
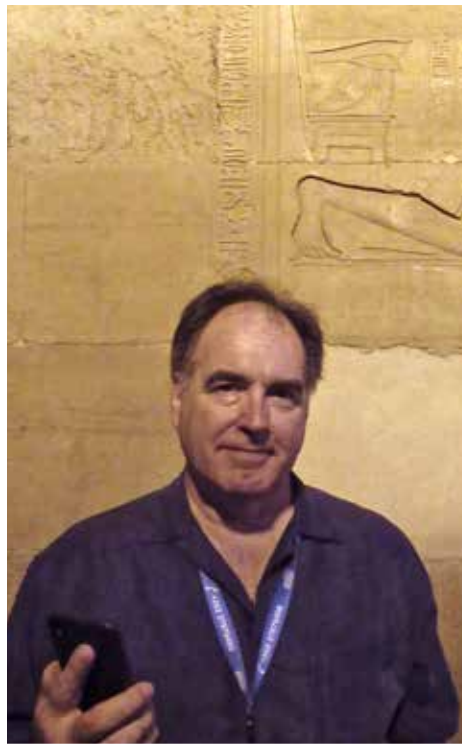
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KOM OMBO, EGYPT

Michael Migliori, MD, Ophthalmologist-in-Chief at RI Hospital, and Chair of RIMS Public Laws Committee, accessed the RIMJ archives from the Temple of Kom Ombo, where a wall carving (far right) is thought to be the earliest known depiction of surgical instruments.

The Eye of Horus (below) is an ancient symbol of healing and rejuvenation, thought to be the origin of the 'R' used in medical prescriptions, although it is also believed that 'R' may derive from the Latin *recipe* which means 'to take'.



The Temple of Kom Ombo is dedicated to the falcon god Horus and the crocodile god Sobek, and sits on the east bank of the Nile River north of Aswan.

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The Maturation of the Primary Care-Population Medicine (PC-PM) Program at the Warren Alpert Medical School of Brown University

MICHAEL J. MELLO, MD, MPH; PAUL GEORGE, MD, MHPE

Almost four years ago in this journal, there were several articles describing a new program at the Warren Alpert Medical School of Brown University (AMS), the Primary Care-Population Medicine (PC-PM) Program.^{1,2} Population medicine, as defined by the Institute for Healthcare Improvement, is the design, delivery, coordination, and payment of high-quality health care services to manage the Triple Aim for a population using the best available resources within the health care system.³ Increasing knowledge and skills in population medicine for physician trainees has been endorsed by the American Medical Association.⁴ A vital component of AMS's program is having enrolled medical students obtain a Master of Science (ScM) in Population Medicine degree by successfully completing a nine-course curriculum to develop skills in this new field. Also, part of the curriculum is completion of a population medicine research project that pairs a student with a research mentor and is done longitudinally over the students' medical school years culminating in a manuscript for a peer reviewed journal. In addition to their mentor, ScM students have access to quantitative and qualitative faculty experts, stipend-funded time during the summer after the first year to work on their project and senior faculty to assist them in navigating their project to successful completion.

The first cohort of 15 students will graduate this May with a dual degree of MD and ScM in Population Medicine. Throughout the development of this novel program we had concerns that although this additional curriculum was important, it might negatively impact the students' traditional medical education. Although we have a limited sample, that is not the case by all objective measures. The PC-PM students have statistically equivalent scores compared to students in the traditional medical school curriculum on Step 1 and Step 2 National Board exams, as well as on exams for each clinical clerkship.

This month's *Rhode Island Medical Journal* contains five manuscripts from this pioneering group of PC-PM students. These manuscripts were chosen for this issue as they all examine a Rhode Island health concern. Recently, Accountable Care Organization-based payment models have grown nationally and within Rhode Island. **JONATHAN STALOFF**, et al. describe Rhode Island physicians' knowledge, attitudes, and confidence regarding Accountable Care Organization. Fundamental to population medicine work is having accurate health data. **JULIA SOLOMON**, et al. compare two databases of health in Rhode Islanders and finds differences between them that gives caution in selection of data to utilize moving forward. Providing healthcare to a prison

population is unique in its challenges. **ALEXA KANBERGS**, et al. probe being incarcerated and having a chronic illness. Mindfulness has been utilized as an adjunct therapeutic modality for health and **MATTHEW PERRY** examines participants' perspectives of it being incorporated into addiction treatment. The Rhode Island Food Bank is a valued community resource and **FAIZ KHAN**, et al. study its contribution to addressing food insecurity of older Rhode Islanders.

These five manuscripts are just a sample of the excellent research projects done by this initial cohort of MD-ScM students with other students in this group having also submitted manuscripts to other peer reviewed journals. There are more AMS students rising through the years working on interesting research with many of them focused on Rhode Island-specific health issues. We celebrate the research of the students in this current issue of the *Rhode Island Medical Journal* and anticipate further research from students in this program positively impacting the health of Rhode Islanders in the years to come. More importantly, we are pleased that nine of the 15 students in this group are committed to doing a residency in primary care, with many of these hoping to stay locally.

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Knowledge, Attitudes, and Confidence in Accountable Care Organization-Based Payment Models Among RI Physicians

JONATHAN A. STALOFF, MD-ScM¹19; KRISTINA A. MONTEIRO, PhD; MICHAEL J. MELLO, MD, MPH; IRA B. WILSON, MD, MSc

ABSTRACT

STUDY OBJECTIVE OR BACKGROUND: To assess Rhode Island (RI) physician knowledge, attitudes, and confidence to succeed in Accountable Care Organizations (ACOs).

STUDY DESIGN AND METHODS: We surveyed RI physicians' attitudes and beliefs about ACOs, including scales measuring Physician Knowledge (7 Multiple Choice and True/False items), Attitudes (8 Likert scale items), and Confidence (7 Likert Scale Items), and examined how physician characteristics related to these measures.

PRIMARY RESULTS: The response rate was 6 percent (72/1183). Means (100-point scale) and standard deviations were calculated for Knowledge 65.3 (22), Attitudes for ACO participants 56.3 (13.2) and ACO non-participants 42.7 (14.3), and Confidence 32.4 (25.9). Primary care physicians had higher Attitudes compared with specialists among ACO participants (60.2 vs. 51.8, $p=.047$) and ACO non-participants (48.2 vs. 34.4, $p=.030$).

PRINCIPAL CONCLUSIONS: RI Physicians have low scores in Knowledge, Attitudes, and Confidence scales in ACOs. Primary care physicians have more positive Attitudes about ACOs than specialists. This study is limited by its low response rate.

KEYWORDS: Population Medicine, Value-based Care, Accountable Care Organizations, Alternative Payment Models

INTRODUCTION

Since the initiation of the Medicare Shared Savings Program (MSSP) and Pioneer programs in 2012, Accountable Care Organizations (ACOs) have been at the center of the US healthcare system's transition from volume to value-based reimbursement.¹ As of January 2018, there were 619 ACOs participating in Medicare's ACO alternative payment model (APM) programs, caring for approximately 12.6 million beneficiaries.² When including Medicaid and commercial ACOs, current estimates indicate there are 1,011 ACOs participating in 1,411 ACO-type payment contracts, caring for 32.7 million Americans.³

While participation in ACO type APMs was voluntary in its first years of adoption, external payer-driven incentives are increasingly pushing provider organizations to participate in an ACO. The Medicare Access and CHIP Reauthorization Act encourages participation in "advanced APMs" through annual 5% bonus incentive payments and an exemption from participating in the new Merit-Based Incentive Payment System.⁴ Current HHS Secretary Alex Azar has indicated that acceleration of value-based care will be one of his HHS's four key foci.⁵

These strong external forces driving ACO adoption raise the question of how much of the ACO movement is driven by physician buy-in, as opposed to administrator decision-making in response to system level pressures and federal policies. With clinician wellbeing a central tenet of the expanded Quadruple Aim, a more complete understanding of physician knowledge, attitudes, and confidence in their ability to succeed in ACO-based APMs is essential.⁶

To address these issues, we surveyed physicians in Rhode Island, one of three states estimated to have at least 30% of lives covered by ACOs (others Maine and Massachusetts).³ As ACO-based APMs emphasize accountability to the cost and quality of care of a population over an extended period, with a focus on caring for multiple common chronic conditions and care coordination between groups of providers, we expected that primary care physicians would demonstrate greater knowledge, attitudes, and confidence in ACOs than specialists.⁷ Additionally, while smaller (ACOs with approximately 5,000 beneficiaries) physician-led ACOs have historically had higher success rates in receiving shared savings payments in Medicare ACOs, we suspected there would be no difference in overall engagement among physicians in large versus small provider practices, and in hospital-owned versus physician-owned healthcare systems versus solo practitioners.⁸ Lastly, we suspected that the majority of physicians, whether ACO-participants or non-participants, would indicate that they were not part of the decision-making process to join an ACO.

METHODS

Participants

The investigator-generated survey was administered in partnership with the Executive Office of Health and Human

Services of RI (EOHHS) and an academically affiliated group practice between January 2017 and October 2017. Initially, the survey was disseminated through EOHHS's January 2017 issue of its "Provider Update" e-newsletter; and then the Chief Medical Officer of an academic practice distributed the survey internally to member physicians twice in September 2017, with a one-month response deadline. No identifying information was collected and no incentives were offered for completion. At the time of survey dissemination, the academic practice had an estimated 200 physicians and the "Provider Update" newsletter had an estimated listserv of 983 Rhode Island physicians. The study was reviewed and approved by the Brown University Institutional Review Board (IRB).

Data

Survey Content

In collaboration with the Rhode Island Quality Institute we developed a survey with four main sections (**Table 1**). The full survey is shown in the **Appendix**. The survey is entirely investigator generated and not validated by prior reports.

Knowledge Scale

In an effort to assess how much physicians comprehend about ACOs and emerging developments around APMs, the Knowledge scale aimed to assess respondents' overall understanding of ACOs through six multiple choice and one true/false question.

Attitudes Scale

This eight-item scale aimed to assess how physicians feel ACOs impact their medical practice, career satisfaction, patient health, as well as the long-term importance of ACOs to the medical profession. ACO participants were asked to respond in the context of their experience with ACOs, and ACO non-participants were asked to respond how they anticipate ACO participation would impact the various constructs.

Confidence Scale

This seven-item scale aimed to assess the overall confidence level among ACO non-participants in their ability to

succeed in specific elements of participating in an ACO, if their organization chose to join one.

Additional Items

All participants were asked if they currently participate in an ACO, anticipate participating in an ACO in the next five years, and if they were included in decision-making to participate in an ACO. ACO participants identified with which types of payers (Medicare, Medicaid, or commercial) they had ACO contracts. ACO non-participants were given the opportunity to select reasons why their organization chose not to participate in an ACO from a list of 12 in a "select all that apply" format, with an option to name unlisted reasons in a free text section. Lastly, all respondents were given the opportunity to submit qualitative comments about ACOs.

Pilot Testing

In February 2016, the survey was pilot tested with six physicians including four primary care and two specialist physicians. The pilot participants reported the survey took between 8-15 minutes to complete. Adjustments were made based on feedback.

ANALYSES

The Knowledge, Attitudes, and Confidence sections were scored on a 100-point scale. The Knowledge section score was a raw percentage of questions answered correctly. For both the Attitudes and Confidence Sections, responses to Likert Scale questions were assigned a numerical value (0, 25, 50, 75, 100). The overall score for both the Attitudes and Confidence Sections were the mean of the individual item responses.

For descriptive statistics of respondent demographics, we calculated frequencies for categorical variables, and means and standard deviations for continuous variables. To assess differences in outlook toward ACOs between primary care physicians and specialists, we compared mean Knowledge, Attitudes, and Confidence scores. To assess whether any relationship exists between practice size or type and overall engagement toward ACOs, investigators compared Knowledge, Attitudes, and Confidence Score by practice size (four groups) and professional status (three groups).

RESULTS

Respondent Characteristics

Seventy-two physicians responded to the survey, for a response rate of 6% (72/1183). Eighty-six percent of participants were MD or DO providers, 69% identified as male, and there was an even split between primary care and specialist physicians (**Table 2**). Among all Rhode Island physicians, 33% are primary care physicians, 67% are specialists, 60% identify as male, and 40% identify as female.⁹

Table 1. Survey Composition

Section #	Construct	# of Items	Scales Used
1	Demographics	11	N/A
2	Knowledge	7	Correct/Incorrect Answers; Total Sum Score Correct
3	Attitudes	8	5-Point Likert (1=Most negative attitude, 5= Most positive attitude)
4	Confidence	7	5-Point Likert (1=Lowest Confidence, 5=Highest Confidence)

Table 2. Respondent Characteristics (N=72)

Respondent Characteristics		N	Respondents (%)
Degree Type	MD or DO	62	86%
	NP or PA	1	1%
	All Other	9	13%
Gender	Male	50	69%
	Female	22	31%
Age	<40	13	18%
	40-59	39	54%
	60+	20	28%
Ethnicity	Caucasian	56	78%
	African-American	2	3%
	Hispanic	1	1%
	Pacific Islander	2	3%
	Other	11	15%
Number of Active Licenses	1	55	76%
	2	12	17%
	3+	5	7%
Specialty	Primary Care	35	49%
	Specialist	36	50%
	N/A	1	1%
Professional Status	Employed by hospital, group, other entity	49	68%
	Practice owner, partner, associate	21	29%
	Other	2	3%
Practice Size	Solo	13	18%
	2-10 physicians	18	25%
	11-30 physicians	18	25%
	31+	21	29%
Use of EMR in practice	Yes	67	93%
	No	5	7%
Morale* (mean (SD))	3.5 (1.2)	72	100%
Optimism about Medical Profession** (mean (SD))	3.4 (1.3)	71	99%
Total Respondents		72	100%

* Morale and Feelings about Current State of Medical Profession (5-Point Likert Scale from Very Negative to Very Positive)

** Feelings about Future of Medical Profession (5-Point Likert Scale from Very Negative to Very Positive)

Survey Responses and Scales

The mean, median, and standard deviations of the three core constructs, the Cronbach's alpha of each construct, as well as of total number of reasons against participating in an ACO and total number of payer types with ACO contracts, are shown in **Table 3**. Respondents in an ACO had more positive Attitudes than those not in an ACO (56.3 vs 42.7).

Among the 22 ACO non-participants who completed the Reasons Against Participating in an ACO section of the survey, the most commonly selected reasons were the financial risk involved (N=13/22), uncertainty of long-term viability of APMs like ACOs (N=13/22), lack of proper financial incentive in payment models (N=12/22), and quality measure reporting burden (N=12/22).

Table 3. Scales and responses

Scale Name	Items	Scoring	Respondents	Median	Mean (SD)	Cronbach's Alpha
Knowledge	7	Percent Correct (out of 100)	72	71.4	65.3 (22)	0.41
Attitude Towards ACOs*	8	zero to 100				0.73
Respondents in an ACO	8	zero to 100	41	56.3	56.3 (13.2)	
Respondents not in an ACO	8	zero to 100	20	39.1	42.7 (14.3)	
Confidence in Ability to Succeed in ACO Model (Respondents Not in an ACO)*	7	zero to 100	28	25	32.4 (25.9)	0.94
Number of Reasons Against Participating in an ACO**	12	Total Reasons Selected (Out of 12)	22	3	3.9 (2.6)	--
Total Number of Payer Types with ACO Contracts	3	Total Number of Contract Types Among ACOs (Options 1, 2, 3)	43	2	1.97 (0.87)	--

* Scale ranges from zero to 100, with 100 = best attitude or highest confidence.

** Only non-ACO participants responded

Bivariate Relationships

There were no significant relationships between any of the independent variables measured and either the knowledge score or the confidence score.

Attitudes

Among ACO participants, primary care physicians had more positive attitudes about ACOs (higher scores) compared with specialists (60.2 vs. 51.8, $p=.047$, **Table 4**). Among ACO non-participants, the same trend held, with primary care physicians having more positive attitudes than specialists (48.2 vs. 34.4, $p=.030$). The number of reasons selected against ACO participation was significantly and negatively

correlated with Attitudes ($r=-0.626$, $p=.029$, data not shown). There were no significant relationships between Attitudes and sex, age, practice size, or professional status.

Involvement in Decision-Making to Become an ACO

Fifty-one respondents responded to the item about involvement with decision-making about joining an ACO, of which 24 said they were involved in their organization's decision-making (**Table 4**). Among ACO participants, those involved with decision-making had higher Attitude scores compared with those not involved (63.9 vs. 51.9, $p=.009$). Among ACO non-participants those involved with decision-making had a trend toward lower Attitude scores (37.5 vs. 49.2, $p=.071$).

Intentions to participate in ACOs in future

Thirty-four of 35 of respondents who currently participate in an ACO plan to continue to participate in the next five years, while one respondent answered "I don't know." Among non-ACO participants, 3 of 10 answered that they plan to join an ACO in the next 5 years.

Qualitative Analyses

Table 5 shows primary themes with representative quotes from respondents about ACOs.

Table 4. Attitude Score Comparisons by Specialty, Involvement in Decision-making

Significant Analyses	Population	N	Mean Attitudes Score (sd), Out of 100	P-value
Primary Care vs Specialists (N=60)				
Among ACO Participants (N=40)	Primary Care	23	60.2 (14.3)	p=0.047
	Specialists	17	51.8 (10.1)	
Among ACO Non-Participants (N=20)	Primary Care	12	48.2 (15.2)	p=0.030
	Specialists	8	34.4 (7.7)	
Impact of Involvement in Decision-making to Join ACO (N=51)				
Among ACO Participants (N=36)	Involved in Decision-making	13	63.9 (13.8)	p=0.009
	Not Involved in Decision-making	23	51.9 (11.8)	
Among ACO Non-participants (N=15)	Involved in Decision-making	11	37.5 (9.2)	p=0.071
	Not Involved In Decision-making	4	49.2 (12.1)	

Table 5. Open Responses

Theme	Representative Quotes
Positive outlook	- "Promotes inter-professional collaboration. Creates healthy community and good business climate if effective."
Suspicion of external influence on autonomy and patient care	- "I don't trust that people making these rules are looking at patients' or physicians' best interests. I believe they are insurance company driven and therefore acting based on financial incentives, not the welfare of patients or availability of medical services to those who cannot afford medical care." - "This is all about cost containment and provider productivity without positive quality impacts on patient care. I see the patient getting further lost in the system as a number not a person." - "I would prefer to run my own practice and enjoy the independence. I am not interesting in being involved with an organization that would change the work culture in a negative way - and yes I have worked for an ACO in the past."
Impact on practice sustainability	- "ACOs are forcing practices to participate or else be affected by lower reimbursements. The small practices will struggle or be unable to sustain the ability to practice." - "Primary care will remain under reimbursed and underappreciated. MIPS will constitute a money transfer from small practices to large."
Lack of knowledge about ACOs	- "I know nothing about ACOs so most of the previous answers about what I know are guess." - "The ACO has little effect on my practice since it is just another bureaucratic acronym in medicine"; "I honestly am not sure what an ACO is!"
Concern about tasks involved in ACO participation	- "EMRs have not evolved sufficiently to support success in an ACO. They remain the most important drag on real efficiency and physician morale." - "I would ask do the providers feel supported in the participation of the ACO by assistance with entry of data and do the providers feel there is timely...reimbursements?"

DISCUSSION

Physicians may be more wary of ACOs than the rapid growth of ACOs indicates. Participants in this study suggest that physicians frequently do not participate in their organization's decision of whether to join an ACO, suggesting that ACO growth may be largely driven by administrators responding to system level economic incentives.

This study indicates that many physicians are poorly informed about ACOs, particularly specialists. Even among physicians who reported participating in the decision to participate in an ACO, the mean attitude score was only 63.9 (highest score=100). Opportunities for engaging physicians may be reflected by themes drawn from this study's qualitative assessment, in which physicians predominantly express concerns over the ACO movement's influence over physician autonomy, practice sustainability, and the ability to succeed in ACOs with current health information technology infrastructure. Physicians expressing a more positive outlook in qualitative responses indicate a hope that participation in ACOs might foster inter-professional collaboration.

Respondents who currently participate in an ACO have contracts with multiple payer types, and overwhelmingly plan to continue participating in an ACO in the coming years. In step with the Quadruple Aim, further cultivation of clinician-level understanding, buy-in, and confidence in ACOs will secure this payment reform's long-term viability.

There are several study limitations. Our response rate was low. The method of dissemination of the survey may have limited recruitment of participants, and specific recruitment efforts within a single large academic practice may have led to oversampling. It is difficult to determine the exact response rate, as the link to the survey in the "Provider Update" was at the bottom of the 15-page newsletter, and we do not know how many newsletter readers saw the participation request. Additionally, we do not know how many physicians in the sampled academic practice saw the email request to participate. Therefore, the results may not be generalizable to all RI physicians. However, the study was well balanced across age, specialty, gender, professional status, and participation status in an ACO. Further, this study is limited in that the scales involved were developed for the purpose of this study and have not been used before. The knowledge scale had a Cronbach's alpha of 0.41, below the threshold for acceptable range at 0.70.¹⁰ Additionally, as policies change, some of the material tested in the knowledge section may benefit from updating.

In conclusion, based on these data, RI physicians do not have positive attitudes, high confidence, or detailed knowledge of ACOs. Further, fewer than half were involved in their organization's decision-making of whether to join an ACO. Primary care physicians and ACO-participating physicians who were part of the decision-making process to join an ACO have more positive overall Attitudes than specialists and those not involved in decisions to join an ACO. Efforts to engage and educate physicians about ACOs are needed.

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Appendix

Prevalence of Tobacco Use and Overweight/Obesity in Rhode Island: Comparisons of Survey and Claims Data

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ABSTRACT

Many states, including Rhode Island, have begun to collect insurance claims data to better understand health-care spending and local health outcomes. In this study, we sought to determine whether or not the prevalence of tobacco use and overweight/obesity in the Rhode Island All-Payer Claims Database (APCD) was comparable to that predicted by national behavioral survey data. We found that the prevalence of these lifestyle-related health problems was lower in local claims data than in survey data, suggesting that this database should be used with caution when exploring issues related to the prevalence of tobacco use and overweight/obesity in Rhode Island.

KEYWORDS: obesity, tobacco, population health

INTRODUCTION

While Rhode Island (RI) has just over one million residents,¹ it also has greater than \$500 million per year in healthcare costs related to tobacco use², and obesity-related healthcare costs of nearly \$2 billion annually.³ Given the magnitude of these costs, as well as the human toll of chronic illness, it is important to better understand who in RI is at risk of tobacco and obesity-related health problems.

Previous research indicates that inpatient diagnoses of behavior-related chronic health conditions may not be accurate.⁴ Electronic health records may not match the Centers for Disease Control and Prevention's (CDC) estimates of obesity, but might be comparable to survey estimates of tobacco use.⁵ RI recently implemented an All-Payer Claims Database (APCD), HealthFactsRI, that incorporates diagnoses connected to any claim processed by a private or public insurer for an RI resident.⁶ The RI APCD therefore captures both inpatient and outpatient diagnoses of tobacco use and overweight/obesity, though excludes diagnoses from the uninsured.

The availability of this APCD data allows for an updated local examination of how diagnoses of chronic conditions such as tobacco use and obesity, as seen in International Classification of Diseases (ICD) codes, are related to survey-based estimates of prevalence. The APCD dataset is particularly

valuable because it includes information on outpatient diagnoses, which have been examined less in previous literature due to lack of availability of data, and represents the healthcare encounters of a larger share of the population than emergency department or inpatient-only data.

The aim of this study was to compare population-level estimates of the prevalence of tobacco use and obesity in Rhode Island, as established by the CDC, with APCD diagnoses of those same conditions. Knowing a patient's probability of being diagnosed with a condition compared to the estimated population-level likelihood of having a behavior-related medical condition can help to clarify whether APCD data is useful to complete population-level analyses. A secondary aim was to examine diagnoses by age, sex, and type of insurance to determine if there is divergence along demographic lines between diagnoses and population estimates. We hypothesize that the APCD and CDC data generated from the Behavioral Risk Factor Surveillance Survey (BRFSS) will not show significant discrepancies in their estimates of obesity or tobacco use. Insurance reporting requirements and the increasing use of electronic health records (EHRs) both incentivize the documentation of these chronic health conditions and make it easier to record and maintain diagnoses.^{7,8}

METHODS

Study Design

This is a cross-sectional study comparing estimated obesity and tobacco use in RI as generated by the BRFSS telephone survey administered annually by the CDC and provider documentation as recorded in insurance claims.

Study Setting and Population

We analyzed data from the 2014 Rhode Island Behavioral Risk Factor Surveillance Survey and HealthFactsRI, the Rhode Island APCD. BRFSS is a CDC-administered, landline and cell-phone, randomized, weighted survey of the adult (ages 18 years and older), non-institutionalized civilian populations of each state.⁹ HealthFactsRI 2014 is an opt-out claims APCD for all privately insured patients (including beneficiaries of self-insured plans) as well as Medicaid and Medicare recipients in RI. The state database includes claims from all

insured persons, adults and children, but our analysis was restricted to adults older than 18. Fewer than 2% of beneficiaries whose claims are eligible for inclusion have opted out (personal communication, database administrator James Lucht).

Study Protocol

Publicly available BRFSS data from the CDC was used.¹⁰ The BRFSS codebook was also obtained from the CDC website. APCD data was extracted from the state database by RI Department of Health employees and sent to the researchers. Multiple ICD 9 codes from the APCD were collected into two variables related to obesity (BMI <25 (normal weight), (BMI 25+ (overweight and obese) and two discrete variables for smoking (current smoker and non-smoker/not recorded).

Measurements

To measure obesity, BRFSS respondents were asked their height and weight, from which BMI was calculated and reported.

Tobacco use was determined both by asking respondents if they have “smoked at least 100 cigarettes in your entire life” and if they now smoke cigarettes “every day,” “some days,” or “not at all.”⁹

The APCD was queried for ICD 9 codes previously correlated with BRFSS questions on obesity and tobacco (Table 1).⁵

Table 1. ICD 9 codes correlated with BRFSS questions on tobacco use and obesity.

Tobacco-related ICD 9 codes	Obesity-related ICD 9 codes
305.1 (non-dependent tobacco use disorder)	278 (obesity unspecified)
649.0 (tobacco use disorder complicating pregnancy, childbirth, or the puerperium)	278.01 (morbid obesity)
989.84 (toxic effect of tobacco)	278.03 (obesity hypoventilation syndrome)
	649.1 (obesity complicating pregnancy, childbirth, or the puerperium)
	793.91 (image test inconclusive due to excess body fat)
	V77.8 (screening for obesity)
	V85.30 (BMI 30.0-39.0, adult)
	V85.40 (BMI 40.0 and above, adult)
	V85.2 (BMI 25.0-29.9, adult)
	V85.530 (BMI, pediatric, greater than or equal to 95 th percentile for age)
	V85.54 (BMI, pediatric, 85 th to less than 95 th percentile for age)
	278.02 (overweight)

Data Analysis

Analysis was completed using STATA 14.0 (College Station, TX), SPSS (Armonk, NY) and Microsoft Excel.

RESULTS

BRFSS for RI in 2014 had 6450 participants, 61% of whom were female. The APCD data included claims for 788,914 insured persons in Rhode Island, 57% of whom were female. (Table 2)

The APCD dataset has a higher proportion of younger persons, and no uninsured persons. The APCD data has a much higher percentage of persons covered by Medicaid than does BRFSS, while the percentage of women, Medicare recipients, and commercially insured persons are similar.

For every measure, the APCD prevalence is lower than that estimated by the Behavioral Risk Factor Surveillance Survey. A weighted Chi-squared statistic for the overall prevalence of tobacco use and overweight/obesity showed that there was a statistically significant difference between the prevalence of both tobacco use and obesity based on which data set the information came from. (Table 3)

Table 2. Demographic characteristics of BRFSS survey respondents and APCD patients

	BRFSS	APCD
Number of Respondents	6,450	788,914
Sex (percent female)	61% (n=3905)	57% (n=452631)
Age distributions (%)		
18-24	4% (n=230)	11% (n=84579)
25-29	3% (n=218)	7% (n=54589)
30-34	4% (n=229)	7% (n=53783)
35-39	5% (n=331)	6% (n=51190)
40-44	6% (n=387)	7% (n=56813)
45-49	8% (n=504)	8% (n=66101)
50-54	10% (n=649)	9% (n=73440)
55-59	12% (n=769)	9% (n=73200)
60-64	13% (n=848)	8% (n=62294)
65-69	11% (n=718)	8% (n=62054)
70-74	8% (n=527)	6% (n=45579)
75-79	6% (n=362)	4% (n=34193)
80+	9% (n=573)	9% (n=70919)
Uncertain/incomplete	2% (n=105)	0% (n=0)
Insurance frequency		
Commercial	56% (n=3610)	52% (n=409886)
Medicaid	5% (n=347)	23% (n=180820)
Medicare	24% (n=1525)	25% (n=198208)
Uninsured	0.7% (n=43%)	not in data, by definition
Other (includes Tricare, Indian Health Service, unsure)	0.07	not in data, by definition

Table 3. Prevalence of overweight/obesity and current tobacco use in Rhode Island as estimated by BRFSS and the APCD.

	BRFSS	APCD	χ^2
Tobacco use (current) overall	13% (n=822)	6%	580 (p<00.01)
Overweight and obese overall	59% (n=3799)	11%	151610 (p<0.001)
Overweight/obese by age in years			
18-24	37% (n=85)	6% (n=5361)	
25-29	51% (n=111)	9% (n=4859)	
30-34	52% (n=120)	11% (n=6011)	
35-39	56% (n=186)	13% (n=6760)	
40-44	63% (n=242)	14% (n=7990)	
45-49	62% (n=312)	14% (n=9381)	
50-54	61% (n=398)	14% (n=10528)	
55-59	60% (n=459)	14% (n=10564)	
60-64	62% (n=529)	14% (n=9017)	
65-69	66% (n=471)	12% (n=7496)	
70-74	66% (n=346)	11% (n=5039)	
75-79	59% (n=259)	9% (n=3121)	
80+	52% (n=299)	4% (n=3034)	
uncertain/incomplete	25% (n=26)	n/a	
Overweight/obese by sex			
Male	70% (n=1795)	11% (n=36127)	
Female	51% (n=2004)	12% (n=53034)	
Overweight/obese by insurance type			
Commercial	59% (n=2121)	12% (n=49487)	
Medicaid	60% (n=208)	0% (n=17565)	
Medicare	61% (n=929)	11% (n=22109)	
Uninsured	65% (n=28)	n/a	
Other (includes Tricare, Indian Health Service, unsure)		n/a	
Tobacco by age in years			
18-24	13% (n=29)	4% (n=3364)	
25-29	19% (n=42)	6% (n=3459)	
30-34	16% (n=36)	7% (n=3927)	
35-39	17% (n=55)	7% (n=3821)	
40-44	20% (n=78)	8% (n=4403)	
45-49	15% (n=77)	8% (n=5522)	
50-54	18% (n=118)	9% (n=6471)	
55-59	15% (n=117)	8% (n=5971)	
60-64	13% (n=111)	6% (n=4018)	
65-69	10% (n=69)	5% (n=3036)	
70-74	8% (n=40)	4% (n=1808)	
75-79	6% (n=22)	3% (n=963)	
80+	3% (n=19)	1% (n=790)	
Uncertain/incomplete	9% (n=9)	n/a	
Tobacco by sex			
Male	14% (n=351)	7% (n=23034)	
Female	12% (n=471)	5% (n=24519)	
Tobacco by insurance type			
Commercial	10% (n=367)	5% (n=19586)	
Medicaid	29% (n=102)	9% (n=16843)	
Medicare	11% (n=172)	6% (n=11124)	
Uninsured	21% (n=9)	n/a	
Other (includes Tricare, Indian Health Service, unsure)	17% (n=73)	n/a	

DISCUSSION

These results suggest that discrepancies exist between the prevalence of tobacco use and overweight/obesity as measured in survey data and RI's statewide claims database. These differences may stem from issues of how representative the APCD population is, or failure of healthcare providers to screen or diagnose, even if data such as height and weight are readily available within the medical record and typical workflow of a medical office.

Because there were differences in the demographics between the two data sets, it is not surprising that the overall percentage of persons estimated to be overweight/obese or using tobacco would not be the same.

However, given the weighting of BRFSS, the results from each demographic group should be representative of prevalence of this condition in the corresponding APCD share of the Rhode Island population, which we did not find. Another potential reason for the differences is that the population characteristics of people who see a healthcare provider in given year may be different from those who do not interact with the healthcare system. In addition, the APCD, by definition, only includes data from insured persons; the health and tobacco usage of insured and uninsured persons may be different.¹¹ However, if differences in health status and behavior of insured versus uninsured person are the cause of the prevalence discrepancy, the difference should not persist when we look at tobacco and obesity by insurance type. The disparity persists, though, when broken down by type of insurance. Furthermore, there are nearly 800,000 patients represented in the APCD, and just over one million residents of Rhode Island; thus, the likelihood of there being a chance difference between the tobacco use and weights of those 800,000 who have claims data and the remaining approximately 200,000 Rhode Islanders whose behavior was imputed based on survey data in 2014 seems unlikely.

The other possible reasons for the discrepancy are related to physician or medical provider behavior. Part of the standard physical, as recommended by the US Preventive Service Task Force, is measurement of height and weight.¹² With the advent of electronic health records, these measurements are often automatically calculated into an easy-to-access BMI, which can even be auto-populated into a provider note. Notes, however, are not the source of billing codes and diagnoses; those must be entered separately. Problem lists may also not populate into a billing code, even though they are used by providers to help manage patient care. Previous studies suggest that it is not uncommon for hospital records to contain BMI information, but for that information to not be entered as a diagnosis.⁴ In addition, some cohort of patients may only come to the doctor when they are sick, and physicians are less likely to perform and bill for health maintenance tasks at a sick visit.

The major limitation in our study was not having the ability to directly compare sub-group prevalence from the

APCD to BRFSS data because of lack of reported variances in the publicly available data extract. We attempted to correct for this with use of the weighted Chi-square statistic for analysis.

While these results are not conclusive, caution should be used when interpreting APCD data surrounding trends in tobacco use and obesity in Rhode Island.

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Incarcerated Individuals' Perspectives on Living with Serious Illness

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ABSTRACT

The object of this study was to elicit patient perspectives on the experience of living with serious illness while incarcerated. The study was conducted at the Rhode Island Adult Corrections Institutions (ACI) in both the men's medium security and women's (all levels) facilities in June of 2016. Semi-structured interviews were conducted with participants, who met study criteria for serious illness. Interviews were coded following the template organizing style. Eighteen participants were enrolled, 13 males and five females with majority Caucasian (n=11) and ages 40-59 (n=9). Incarcerated individuals with serious illness perceived diverse healthcare deficits, including access to care, quality of care, and accommodations for medical needs and physical disabilities. Deficits were somewhat mitigated through prison programs and support from community advocates. The findings of our study support a quantitative needs assessment of available physical accommodations in prisons, national standardization of what constitutes adequate care, and reevaluation of the prison co-pay system.

KEYWORDS: correctional health care, incarceration, chronic illness, user's views, qualitative research

INTRODUCTION

The United States incarcerates a higher proportion of its population than any other country in the world. Although the nation has less than 5% of the world's population, it is home to 25% of the world's incarcerated individuals.¹ One rapidly growing subset of the incarcerated population is individuals over the age of 55. Since 1990 the number of incarcerated individuals over the age of 55 has doubled, bringing with them a high prevalence of chronic illness.^{2,3} Approximately 40% of the incarcerated population suffers from at least one chronic medical condition, with a higher rate of diabetes, hypertension, and asthma than their non-incarcerated counterparts.⁴ All incarcerated individuals are legally guaranteed health care "at a level reasonably commensurate with modern medical science and of a quality acceptable within prudent professional standards."⁵ This requirement places pressure on the penal system to provide community equivalent health services in an environment historically built for the purpose of punishment.⁶⁻⁸

Existing research on illness among incarcerated individuals has identified multiple factors that complicate the delivery of health services in prisons, including security protections for providers, formulary and other limitations on medications available to providers and their incarcerated patients, co-pays for often indigent prisoners, and overcrowding with limited resources for an increasingly large population.⁷⁻¹¹ However, there is a paucity of data analyzing the prisoner perspective on the quality of and barriers to care provided in this setting. The critically important voice of the seriously ill incarcerated individual is largely missing from prison health research despite being the most important stakeholder perspective.¹²

Through interviews with inmates with serious illness, this study seeks to understand the experience of seriously ill, incarcerated individuals and how the prison system in one state meets or fails to meet the healthcare needs of these individuals.

METHODS

This study was conducted within The Rhode Island Adult Corrections Institutions (ACI) in the men's medium and women's (all security levels) facilities. In June and July of 2016, the principal investigator (PI) conducted semi-structured oral interviews with seriously ill, incarcerated individuals. Participants were eligible for the study if they had a chronic serious illness, defined as "permanent or long-term conditions (such as Amyotrophic Lateral Sclerosis (ALS), Chronic Obstructive Pulmonary Disease (COPD), or cancer), chronic conditions requiring complex treatments (including chemotherapy or dialysis), and/or chronic conditions requiring recurring inpatient care in a hospital setting (such as congestive heart failure)." These criteria were developed to capture participants with chronic, serious illness who have frequent interactions with the prison health care system.

Participant Recruitment

All primary care practitioners working in the prison facilities were briefed on the study and asked to refer eligible individuals using a permission-to-be-contacted sheet. Contact sheets were collected until providers no longer had additional referrals. Prior to beginning the interview, informed consent was obtained and participants were assured of confidentiality.

Interviews

Interviews were single sessions conducted in a clinical suite without prison or medical staff present, and were audiotaped

without including any identifying information. Questions for the interviews were designed to elicit participants' experiences with, perceptions of, and attitudes toward the health care system while incarcerated. The questions focused on concepts of autonomy, access, and quality, as identified in prior studies.^{7,8} The interview guide was reviewed and approved by both the medical director of the prison system, and a human rights lawyer with extensive experience in prison health. The guide was composed of eleven open-ended questions. Each participant was asked these core questions, followed by unscripted questions for clarification or to probe more deeply into participant answers.

Data Analysis

Data was analyzed following the template organizing method.¹³ A codebook was created based on an initial literature review, interview questions, and preliminary scanning of the text, and was then used to assign codes to interview transcripts. Interview transcripts were analyzed and segments were assigned relevant codes. The two authors coded groups of three transcripts independently and met to reconcile inconsistencies as well as add, remove, or refine codes. This process was repeated until all transcripts had been coded. After completing the coding process, focused coding was used to group codes into largest segments, identify relationships between segments, and then derive overarching themes.

This study was approved by the Institutional Review Board of Brown University and the prison system's Medical Review Advisory Group.

RESULTS

Participant characteristics

A total of 18 interviews were conducted, 13 identified as male and five female. Participant decade of life ranged from 20s–80s, with the greatest number of participants (9 out of 18) between 40–59. Participants' self-reported medical conditions were diverse; the most common included cancer, poorly controlled/complicated diabetes, and severe mental health conditions requiring frequent hospitalization (Table 1). Interviews ranged in length from 10:09 to 48:18 minutes, with an average length of 27:03 minutes.

During interviews, three major themes emerged: accommodations, access to care, and quality of care.

Theme 1. Accommodations

Multiple participants discussed the availability of appropriate accommodations for their illness or disability, particularly those related to structural deficiencies of the physical environment.

Based on participant comments, the physical structure of the prison was not equipped to accommodate numerous inmates with physical limitations. Many participants with impaired ambulatory conditions had trouble navigating the prison facilities. For example, accessing bathrooms and showers was a common challenge. Most importantly, the need for handicap accessible cells far outstripped the supply. One inmate summarized the discrepancy:

"The biggest problem is this facility holds 1200 people

Table 1. Participant Characteristics

Baseline Characteristics	Number of Participants (n=18)
Gender	
Male	13 (72%)
Female	5 (28%)
Age	
20-39	4 (22%)
40-59	9 (50%)
60-79	4 (22%)
80 or >	1 (6%)
Race/Ethnicity	
Caucasian	11 (61%)
Hispanic/Latino	2 (11%)
African American	4 (22%)
Other	1 (6%)
Medical Condition^a	
Amyotrophic lateral sclerosis	1 (6%)
Cancer	3 (17%)
Chronic osteomyelitis	1 (6%)
Congestive heart failure	2 (11%)
Chronic obstructive pulmonary disease	1 (6%)
Diabetes mellitus	3 (17%)
Epilepsy	2 (11%)
Inflammatory bowel disease	1 (6%)
Severe Mental Health Condition	3 (11%)
Other	2 (11%)

^aIncludes multiple conditions for each patient if present, percentage indicates percent of total study population

and there are only two handicapped cells in the whole place. I was fortunate to get one of them, but there are other people here that have similar disabilities like me and cannot get the same level of care."

Inmates requiring higher levels of care can elect to have a fellow inmate serve as a 'caretaker.' Caretakers were paid by the prison to provide a broad range of services, including transporting wheelchair-bound participants around the large facility. Caretakers also assumed greater care for their fellow inmates by becoming cellmates.

Theme 2. Access to Care

Multiple factors, including cost, wait times, social supports, and a lack of health-related educational materials influenced inmates' ability to access appropriate health care.

Cost

Participants focused on two distinct forms of cost related challenges: 1) prison cost-saving policies, and 2) co-pays for medical visits as a financial burden. Many participants felt that cost was the prison administration's largest barrier to

providing medically-indicated pharmaceuticals or assistive devices such as canes or walkers. Some described being denied their previously prescribed medications upon prison entry. Substitute prescriptions were often considered by the participants to be less effective or inferior. Due to cost, participants also struggled to access devices including outdoor wheelchairs, lumbar support pillows, and night guards.

"I grind my teeth at night. I have told [the provider] I grind my teeth at night, I need a night guard. Night guards cost a lot of money and he doesn't want to order me a night guard. He is telling me put a towel between my teeth or something crazy."

Seven of 18 participants specifically mentioned co-pays, charged by the prison, as a barrier to care. Generally, co-pays are charged for medical visits, medications, and trips to outside appointments, and range in price from \$3 to \$6. There are several exemptions for which the co-pay requirements are waived, including emergency services, initial intake physical, immunizations, dressing changes, visits initiated by medical staff, yearly dental cleaning, and prenatal care. Multiple participants, who predominantly relied on wages from prison jobs (\$1–3 dollars per hour) for income and amenities, reported deferring care due to the co-pay. However, individuals with outside sources of income, primarily from family members depositing money into prison accounts, did not perceive co-pays as a significant barrier.

Wait times

Many participants discussed long wait times and delays for in-prison medical care and outside visits to specialists, particularly for non-emergent chronic care or specialty health care needs. To access healthcare services, an incarcerated individual would "put in a slip" to the medical unit and wait for their name to appear on a "med unit list" indicating they would be seen that day. Inmates described wait times for non-urgent needs ranging from a few days to a few weeks. Non-urgent specialty appointments took even longer given the need for a minimum number of patients before an outside specialist would come to the prison. However, even though inmates were frustrated with wait times, many voiced an understanding that delays were inevitable and providers were doing their best given the limited resources.

"You got to understand, there is 1200 guys here so you know things don't just happen at the snap of a finger. But with a little bit of patience, you will get whatever treatment you need done."

Health Information

Due to security concerns, inmates had access to medical literature available in the library, but could not freely access the Internet or outside books. Inmates relied on providers and family members for information related to their illness. Some participants described apathetic providers who ignored requests for health education, while others described positive experiences with providers who worked to educate them about their illness.

"She [my NP] will go over anything you want to go over and she is very helpful in pointing out side effects and advantages and disadvantages; she will give you the total lowdown of any situation."

Family members often served as sources of medical information, financial supports, and essential advocates for accessing necessary medical accommodations. One participant described the importance of her family supports:

"They try to do whatever they can. They have called here. Like I said, now they are calling lawyers. They do whatever they can for me. If I have a problem, I call them. Because I got nowhere else to turn, no one is going to listen."

Theme 3. Quality

Some of the factors impacting the perceived quality of healthcare in the prison were 1) the quality of healthcare providers, 2) limited choice of providers and 3) inadequate pain management.

Participants' health care teams often changed due to high provider turnover; participants commented on discrepancies in quality of care between different providers. Well-regarded providers were those who were perceived to be patient-centered and knowledgeable.

"She was thorough. She listened to me. She tried everything she could to help me. She treated the whole person. She was really, really good. The best doctor I have ever had."

Conversely, participants considered providers to be of poor quality if they were perceived to be primarily concerned about cost or were perceived to be burnt out. This perceived poor quality was compounded by the limited number of providers available to inmates.

Ineffective pain management also impacted perceptions of quality for multiple inmates. One common experience among participants was the transition from their community pain regimen when entering prison:

"Yeah, they cut out a lot of the meds...dealing with the pain, you just tough it out. I mean they are giving me some [pain meds], but very little. There is a huge difference, I mean I was on a lot of pain meds on the outside."

DISCUSSION

Our study contributes important qualitative data to the understanding of the seriously ill, incarcerated individuals' lived-experience. Study participants perceived deficits across multiple healthcare domains, including access to care, quality of care, and medical accommodations. Many participants experienced substantially limited healthcare resources in prison, including inadequate structural accommodations and limited access to healthcare staff.

Importantly, the findings of our study highlight that both prison authorities and incarcerated individuals need to rely on third parties to mitigate the larger structural and bureaucratic barriers that impact healthcare delivery. In prison, authorities hire other incarcerated individuals, or "caretakers," to transport immobile, seriously ill inmates across penitentiary grounds, or to serve as caretakers for those with conditions in need of monitoring, including epilepsy. These "caretakers" are largely considered a positive component to participants' care. Incarcerated individuals also benefit from social supports outside of prison who would advocate on their behalf for items such as outdoor wheel chairs and drugs that were not on the formulary. With legal requirements

to provide a community standard of care for incarcerated individuals,⁵ third parties appear to be one means through which prison authorities attempt to fill gaps in services and incarcerated individuals can obtain the care they need. Our study supports prior research findings that seriously ill inmates face multiple barriers to receiving care that meets their health needs. These include co-pays, long wait times, and prison facilities that offer inadequate accommodations for illness-related needs.^{8,14} To keep up with a growing population of aging and chronically ill inmates, prisons would ideally need to design or retrofit facilities that accommodate the complicated serious diseases of incarcerated individuals. This is an expensive proposition that is unlikely to happen without external incentives including legal challenges based on the Americans with Disabilities Act, among other laws that have been successfully used to change prison policy and practice. Also, further efforts could be made to expand and utilize policies including those that facilitate the medical release of elderly and terminally ill inmates.¹⁵ In the interim, given the enormity of undertaking large structural changes, expanding alternative programs such as the “caretaker” model where able-bodied prisoners provide simple services to inmates who have special care needs could provide immediate and widespread benefit. Additionally, prior studies suggest that interventions designed to empower patient autonomy through self-directed education, peer education, or group education visits can benefit incarcerated individuals.^{8,16}

LIMITATIONS

There are several limitations to consider when interpreting this study. First, the study took place in a single state that uses a unified system for all incarcerated individuals; its conclusions may not be generalizable to other facilities that utilize a dual system (with separate prisons and jails). However, given that this is a novel qualitative study, it provides information upon which future studies could expand. Second, the study has a small sample size, with heterogeneous gender and disease status. Prior research has focused on single genders and diseases; more research is needed to examine the population of seriously ill incarcerated individuals.^{8,12}

CONCLUSION

To summarize our findings, incarcerated individuals with serious illness face numerous challenges including poor accommodations, long wait times and prohibitive costs while incarcerated, and rely on programs such as peer caretakers and advocacy from family members to meet their health care needs.

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Perceptions of Mindfulness: A Qualitative Analysis of Group Work in Addiction Recovery

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ABSTRACT

IMPORTANCE: While mindfulness as a treatment for addiction has been objectively studied in a variety of settings, relatively little focus has been given to the subjective experience of program participants.

OBJECTIVE: To elicit best practices for mindfulness work in addiction recovery.

DESIGN AND SETTING: Participant observation and semi-structured interviews with participants in a mindfulness course set within a residential addiction recovery program.

RESULTS: Many participants found the practice to be a useful skill for relaxation and impulse control. Most planned to continue with mindfulness practice upon completion of the course. Of particular emphasis was the importance of genuine relationships, trust, and mutual respect between participants and instructors. Some participants reported feelings of patronization, which led to decreased investment in the coursework.

CONCLUSION: Mindfulness is a promising treatment for addiction. Several benefits and barriers were identified. This study was limited by a small sample size; generalizability may be limited due to particularly severe socioeconomic stressors of the study population.

KEYWORDS: mindfulness, addiction recovery, qualitative analysis

INTRODUCTION/BACKGROUND

As the opioid epidemic continues to unfold, strategies for addiction treatment have increased in breadth and nuance. The body of data has grown regarding mindfulness and other therapies for addiction treatment.^{1,2,3} However, relatively little focus has been given to the lived experience of program participants. While perceptions of treatment are important in any context, they find particular salience in conditions where ongoing buy-in and participation are required.

This study was designed in partnership with a long-term recovery program to explore, through qualitative interviews, and program participants' perceptions about the use of mindfulness in addiction recovery. The objective of the study is to

provide information in the form of "lessons from the field," to enhance relevance and appropriateness in the development of mindfulness programming for addiction treatment.

METHODS

Study Design

The study was located at a wraparound housing and recovery program in southern New England. Two data sets were used – a series of semi-structured, face-to-face qualitative interviews and notes from the author's participant observation. Interviewees were those involved in the recovery program either as participants or staff. The mindfulness course was designed as a 12-week linear course and interviews took place at the end of a 12-week cycle. It was taught in the context of a number of other weekly therapeutic and life-skills' groups, most of which were taught by program counselors, not third-party instructors. Admission to the recovery program is rolling, so not all interviewees had completed the entire 12-week meditation course at the time of interview; all had attended at least 6 sessions. The 90-day recovery program is typically the first and most intensive phase of recovery. Participants were recruited via in-person sign-ups during the final two sessions of the course. The author's participant observation data was derived from attending an entire 12-week cycle of the course.

Interview guide development and data collection

The interview guide was developed in consultation with staff at the recovery program. This analysis included data from all parts of the interviews with specific focus on reception of the course and relationships between participants, course instructors, and program counselors. All interviews were conducted in July and August 2016. Interviews ranged from 20-60 minutes. Participants were provided with a \$15 Visa gift card upon interview completion. Interviews were digitally recorded in a private setting, de-identified, uploaded to a secure drive, and transcribed.

Consent forms were signed by all interviewees prior to interview. During the participant observation period, information regarding the project was provided to all program participants, teachers, and counselors; all parties were given the assurance of anonymity. This project was reviewed and approved by the Brown University Institutional Review Board.

Immersion/Crystallization⁴ was used for data analysis, whereby the author thoroughly read through all transcripts and interview and participant observation notes to identify themes and patterns and associated quotations, while maintaining running notes to document the analysis process. A second pass of immersion/crystallization reading was conducted to compare with the first-pass analysis. Next, the interview transcripts were placed into a grid format sorted by question, which was used for a third round of immersion/crystallization where the emerging interpretation was confirmed or disconfirmed and supportive quotes were identified. Finally, findings were again compared to the author's participant observation notes to further contextualize the analysis and arrive at final interpretation.

RESULTS

Interviews were conducted with 14 adults who were participating in the treatment program, as well as two counselors from the program and three third-party mindfulness instructors contracted specifically for the mindfulness course. One participant interview was excluded from analysis due to a medical concern that arose during the interview. Participants ranged in age from 23 to 57. People self-identified as a number of races including black, white, Latino, and others. All participants lived on-site at the treatment program, and 57% were born in the state. Prior exposure to mindfulness ranged from none to previous completion of similar courses. Third-party mindfulness teachers all self-identified as white and ranged in age from 63 to 67. Program counselors ranged in age from 27 to 55 and self-identified as white, black, and/or Latino.

Emotion and Cognition: Regulation, relaxation, decision-making

The most reported positive impact of the class was stress relief, both as a direct result of time in class and from skills applied later. This was noted to be important in the context of the stressors of early recovery in a residential program. "It taught me how to breathe right and pay attention to my breathing, and when I get tensed up I know what to do – the exercise to just loosen up and relax."

Participants noted the ability to make decisions more thoughtfully and avoid reflexive reactions that might normally lead to conflict. Some interviewees brought this change to a deeper level, endorsing an improvement in perspective and outlook. This change was attributed to a combination of the mindfulness work and the overall recovery process. "The way I see it is that I'm starting to come out of the gray shadows of my growth and aspects of life, you know? I'm starting to see color now instead of the black and white, you know, which is a good thing for me."

Personal Investment as Essential

Eleven participants reported an intention to continue with meditation and/or yoga upon completion of the course. Degree

of engagement in the course varied. Engagement with the course was attributed by some to a recognized need to change thinking patterns and develop recovery skills. Some described being frustrated with those who took it less seriously:

"What I would change about the class? Attendance. Be on time. Don't put your feet on top of the table and on top of the chairs. Don't think it's a lounging place. You're not here to be lounged. You're here to understand about your addiction and learn how to fight with your addiction."

Disengagement was connected by interviewees to physical symptoms of detox. Instructors felt it was important to be flexible with participants whose level of attention and engagement varied. "Granted they're all dealing with [detox]... So some people just close their eyes and fell asleep... some of [them] need to sleep. Let them sleep."

Religious conflict was not a concern for the majority of interviewees. Three of 14 participants felt it was a religious practice. Of those three, one reported this as a conflict with personal values.

Relationships and Community as Foundations of Recovery

Participants generally did not feel close with the third-party instructors; this lack of relationship was described as a barrier to engagement. Some participants expressed frustration over conflicts with the course teachers, and a sense of alienation resulted. "I felt like I never wanted to participate because I was going to get either yelled at or put down."

The lack of connection with third-party instructors stood in contrast to the strong relationships participants described with the recovery program counselors. Multiple interviewees noted family connections and a shared background between counselors and participants, reinforcing the sense of community that was described as a core strength of the program. This led to increased trust in the program and investment in the work of recovery.

"So to me it's like a family... I'm learning how to trust more and more every day. I know that they're not there to hurt me like sometimes outside people or somebody that's relapsed will say things that make you feel like they're against you. [This program] has never done anything to me to make me feel like that; so, it's like why wouldn't I trust them and learn how to have a healthy relationship with people?"

Overall, interviewees expressed that the stable, close community of the residential program was foundational to their recovery process. "It's like you can come in the door and work around your family."

Set and Setting

Participants in this study had attended mindfulness sessions in multiple environments – an old basement classroom, a yoga studio, and a classroom within a brand new facility. Many participants and teachers noted the effect of the environment on the effectiveness of the course. They reported that having appropriate equipment instilled a greater sense

of being in a peaceful space, which led to increased engagement. “We could sit down on pillows and do everything the right way with the yoga.”

Complexity of Recovery

Interviewees described the difficulty of recovering from long-standing addiction. Some reported having initially underestimated the intensity required to achieve sobriety. Other common themes included difficulty leaving residential treatment facilities and maintaining sobriety after reintegrating to normal life.

“Like you know when 9/11 had hit, when they saw all the survivors come out, you know you go running to the people that survived. That’s how we see people that come out of addiction; when someone makes it the next day. You go running to that person because it’s like that’s the battle. You just give that person a hug because it’s a battle.”

DISCUSSION

Particular themes emerged through the interview and analysis process. These themes can be grouped into salient learning points for members of the recovery and mental health community who seek to integrate mindfulness work into existing programs.

Timing of the Coursework (Wait until detox is over)

Course participants, teachers, and research observers all noted that participants who were new to the program were more likely to fall asleep in class, have trouble concentrating, and generally be less likely to participate. The most apparent contributing factor was the physical state of withdrawal, including fatigue, depressed mood, difficulty concentrating, and physical discomfort. The three primary elements of the mindfulness program were lecture, group discussion, and contemplative practices, all of which were a challenge within the context of withdrawal.

Opt-Out Opportunities for Group Work

Formalized meditation practice is not for everyone. Previous studies have shown that people can experience re-traumatization, anxiety and panic, and other adverse effects.⁵ Furthermore, we know more colloquially that mindfulness work is only successful if it is undertaken voluntarily. As such, in group settings such as partial hospitals or residential programs, where it may not be feasible for people to leave the room during a formal meditation, it may be helpful to have other quiet, relaxing options for those who do not wish to meditate. These could include adult coloring books, headphones with relaxing music, or books to read. It can be a challenge to maintain a quiet atmosphere conducive to meditation for those who do wish to engage, and providing alternatives can mitigate audible distractions.

Relaxation Itself is Valuable

As medical professionals, we are oriented towards maximizing the effects of any intervention. We look for prolonged sobriety, improved depression, and other tangible, measurable outcomes. This study found that the most common benefit reported by program participants was that it helped them relax. This in and of itself is a valuable benefit. For individuals dealing with the stress of recent homelessness, early recovery, and the many co-morbidities that accompany these challenges, a chance to relax is a diamond in the rough. People reported looking forward to returning to the weekly mindfulness sessions because, regardless of the emotional state they brought into the space, they would come out feeling more relaxed.

Meaningful Relationships are a Cornerstone of Recovery

Consistently throughout the study, the strengths and weaknesses of the recovery process hinged on personal relationships. Reported problems with the class correlated with a feeling of disconnect between participants and the course instructors, and clear strengths of the recovery program were its senses of family, genuine love, and of being seen by participants and staff. This was further reinforced by the fact that many people employed by the organization were graduates of its programs. Addiction treatment programs would do well to consider the identities and backgrounds of staff and to foster relationship building. This may seem to conflict with medicalized notions of professionalism, which leads to a complex conversation that should be weighed against the realities of what it takes to maintain sobriety.

CONCLUSION

Mindfulness instruction is a promising component of addiction recovery and other group-based therapeutic modalities. While its effectiveness has been demonstrated quantitatively, it is important to consider the context, content, and quality of such training. This study was limited in that its sample size was small and studied only one program. Generalizability may be difficult because results could vary across different recovery settings, with instructors of different backgrounds, or with recovery populations with fewer socioeconomic barriers than this population face, such as homelessness. Moving forward, this study would ideally be part of a best-practices conversation for recovery-service providers to minimize harm and bring patient perspective to the discussion in a meaningful way. Additional research on incorporating patient voices into the mindfulness intervention design process and developing facilitation skills for people in recovery would further increase the utility and reach of mindfulness interventions for the treatment of addiction.

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Impact of Participation in the Commodity Supplemental Food Program on Food Insecurity Among Low-Income Elderly Rhode Islanders

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ABSTRACT

BACKGROUND: Food insecurity continues to impact low-income elderly Americans. The Commodity Supplemental Food Program (CSFP) is a federal food-box program targeted specifically to this population. However, the effectiveness of this program has not been well studied.

DESIGN: We conducted a cross-sectional survey evaluating the effects of CSFP participation on food insecurity status of elderly low-income Rhode Islanders. This study was conducted during June and July 2016.

PARTICIPANTS: A total of 93 responses was received. About 50% was from individuals receiving boxes at food pantries and 50% was from those receiving boxes at senior housing.

RESULTS: About 85% of the survey population was found to be food insecure prior to CSFP participation. Overall, CSFP participation was associated with a 20.7% decrease in food insecurity. Reduction of food insecurity was stronger among senior housing participants.

CONCLUSIONS: CSFP participation can help reduce food insecurity among elderly low-income Rhode Islanders.

KEYWORDS: Commodity Supplemental Food Program (CSFP), food insecurity, senior hunger, Rhode Island Community Food Bank

BACKGROUND

In 2015, nearly 5.4 million Americans over the age of 60 were food insecure, defined as having limited or uncertain access to adequate food.¹ This reflects 8.5% of the senior population, up from 5.5% in 2001. By 2025, the number of food insecure seniors is predicted to increase by 50%.² A variety of federal programs, such as the Commodity Supplemental Food Program (CSFP), has been established to assist low-income seniors in obtaining enough food. Prior to 2014 the CSFP also targeted children under 6 years old and pregnant, postpartum, and/or breastfeeding women, but now exclusively serves the elderly. The USDA requires that participants be at least 60 years of age and at or below 130 percent of the Federal Poverty Income Guidelines to be eligible for CSFP. Each month, eligible individuals receive a

box of food that includes vegetables, grains, juice, and other products that the USDA claims provides adequate nutrition for its target population. While the CSFP is federally funded, state agencies administer the program. According to the USDA, the program served 630,000 individuals monthly nationwide in 2016. In Rhode Island, the Rhode Island Community Food Bank manages over 1,500 CSFP boxes per month.³ The agency packages CSFP boxes and delivers them to community partner sites, which distribute the boxes to program enrollees. Enrollees then return monthly to community sites, which include food pantries and senior housing, to verify enrollment and receive their boxes.

Despite the financial investment in the program, there is a dearth of literature on the impact of CSFP and whether it achieves its core objectives. A 2005 evaluation of the program in New York suggested CSFP recipients have similar levels of food security as seniors participating in the Supplemental Nutrition Assistance Program (SNAP), another federally funded and state-run program.⁴ Furthermore, a qualitative 2008 study from the USDA highlighted the role of CSFP as the sole source of food assistance for many seniors and as a gateway to other services.⁵ However, studies are inconclusive about whether the program effectively relieves food insecurity. This research is crucial for informing state and federal policy, especially as the current administration has proposed eliminating CSFP funding in the 2019 fiscal year budget.⁶ This present study investigates whether CSFP has reduced food insecurity for low-income RI recipients. In addition, this study will explore whether the effect of the CSFP on food insecurity on this population varies based on other factors.

METHODOLOGY

A 10-item survey was administered at food pantries and senior housing in RI during June and July 2016 at monthly box distributions. The survey assessed demographic information, SNAP participation status, health status, and food-insecurity risk. Food insecurity was assessed using a 2-item screen using questions from the USDA Food Security Module. This screen, known as the Hunger Vital Sign,⁷ was previously validated.^{8,9} To observe changes in food security status after program enrollment, participants were instructed to answer each item of the screen twice in the

following manner: "I am going to read you three statements. First, think about the time before you started receiving these boxes, and tell me if each of these statements was 'Often true,' 'Sometimes true,' or 'Never true.' Now, think about the time since you started receiving these boxes, and tell me if each of these statements was 'Often true,' 'Sometimes true,' or 'Never true.'" The three statements were read in succession to minimize response bias.¹⁰

Surveys were administered in English or Spanish to CSFP participants who had been enrolled in the program for at least one month at the time of box distribution.

Site Selection

Sites were pre-selected by a RI Community Food Bank staff member based on geographic variability, logistical feasibility and how representative they were of the overall RI CSFP population. Furthermore, only sites where distributions had also taken place at least one month prior to the time of survey administration were included in the study. Communities chosen for recruitment of participants included Providence, Coventry, Cumberland, Newport, Central Falls, Little Compton, Cranston, and Warwick. In total, 35.9% (n=14) of all RI CSFP partner sites were selected for inclusion in the study.

Participants enrolled in the CSFP after being identified by a manager at their respective sites. At food pantries, participants who had already been utilizing the site for food would pick up their CSFP boxes in person on specific dates. At senior housing, eligible residents enrolling in the program would have their CSFP boxes delivered directly to them.

At the selected sites, program enrollees were notified about the survey as they received their boxes. Those who agreed to take the survey would approach a separate table and complete the survey either before or after receiving their box. Before beginning the survey, they were notified that completing the study was voluntary and would not affect their continued participation in the CSFP, and that their answers would remain anonymous. The survey was administered with the researcher reading the questions to participants who were unable to read. Following survey completion, participants could choose between various incentives (bag clips, air fresheners, jar grips, measuring spoons, or small containers of Tupperware) as compensation.

Data Analysis

Respondents were considered food insecure if they answered "Sometimes true" or "Always true" to either of the two items in the food security screen. We further characterized food insecurity by a scoring system – any response of "Often true" was assigned 2 points, "Sometimes true" was assigned 1 point, and "Never true" was assigned 0 points. "High food insecurity" was defined as a score of 3–4 for the two items; "moderate food insecurity" was defined as a score of 1–2, and "Food secure" was defined as a score of 0. We used

a McNemar's chi square test for paired nominal data to compare respondents' levels of food insecurity before and after starting the program. A $p < 0.05$ indicates a significant difference in responses.

RESULTS

Overall, 93 participants completed the survey. Of those approached for the survey, 10.5% (n=11) refused to participate. **Table 1** outlines the characteristics of this survey sample, the survey site population, and the overall RI CSFP recipient population. No differences in gender or age existed between these groups. 75.3% of respondents completed the form in English, versus 24.7% who completed the form in Spanish. A slightly greater proportion of respondents in the sample identified as white (57.0%) compared with those in the survey site (40.2%) and overall population (45.8%). A similar proportion of respondents received their food boxes at senior housing (49.5%) as did from food pantries (50.5%).

The majority (83.7%, n=77) of CSFP recipients in the sample were concurrently enrolled in SNAP. A slight majority of respondents were in self-reported good health (58.1%), defined as having "Excellent", "Very Good", or "Good" health. 41.9% of respondents were in self-reported poor health, defined as having "Fair" or "Poor" health.

Table 2 outlines the food insecurity status of respondents before and after program enrollment. Overall, baseline food insecurity was high (84.8%), with program participation

Table 1. Baseline Characteristics of the RI CSFP Recipients

Characteristic	Survey Sample (n=93) n (%)	Survey Site Population (n=699) n (%)	Overall CSFP Population (n=1,785) n (%)
Average Age	71	71	72
Age Range	60-91	60-100	60-100
Gender			
Female	60 (64.5)	486 (69.7)	1,240 (69.7)
Male	33 (35.5)	211 (30.3)	540 (30.3)
Language			
English	70 (75.3)	383 (54.8)	1,085 (60.8)
Spanish	23 (24.7)	316 (45.2)	700 (39.2)
Race			
White	53 (57.0)	281 (40.2)	818 (45.8)
Hispanic	26 (28.0)	301 (43.1)	682 (38.2)
Black/African American	6 (6.5)	54 (7.7)	142 (8.0)
Other	8 (8.6)	63 (9.0)	143 (8.0)
Site Type			
Food Pantry	47 (50.5)	450 (64.4)	1,079 (60.5)
Senior Housing	46 (49.5)	249 (35.6)	654 (36.6)

significantly decreasing insecurity levels (84.8% to 64.1%, $p<0.05$). Results remained significant when stratified by gender ($p<0.05$ for both males and females) and health status ($p<0.05$ for both participants with relatively poor and

relatively good health). However, differences emerged based on site type and SNAP status. Interestingly, respondents receiving their boxes at senior housing experienced a significant drop in food insecurity (84.4% to 48.9%, $p<0.05$), while those receiving their boxes at food pantries did not (85.1% to 78.8%, $p=0.37$). Additionally, SNAP recipients experienced a significant drop in food insecurity ($p<0.05$), while non-SNAP recipients did not ($p=0.37$).

Table 3 and **Figure 1** further characterize effects of program participation on food insecurity for food pantry versus senior housing recipients. Prior to program administration, both groups had similar levels of food insecurity. However, differences emerged when looking at moderate versus no food insecurity. Post-CSFP, many more senior housing recipients had no food insecurity (51.1%) versus food pantry recipients (21.3%). Concurrently, food pantry recipients appeared to have greater levels of moderate food insecurity (66%) versus senior housing residents (37.8%). Of note, levels of high food insecurity appeared to drop markedly for both food pantry (42.6% to 12.8%) and senior housing (35.6% to 11.1%) participants.

DISCUSSION

Our data show an alarming level of baseline food insecurity among this sample of the senior low-income RI population. Prior to program participation, 84.8% of the survey population was found to be food insecure, compared with 12.8% of the overall RI population between 2014 and 2016.¹¹ Participation in the CSFP was associated with a 20.7% decrease in food insecurity, representing a marked decrease compared with baseline levels.

The effects of CSFP participation on food insecurity remain significant when stratifying by gender and health status. However, differences in the effects of program participation emerged when stratifying by site type. Our data indicate that senior housing recipients, as compared to food pantry recipients, demonstrate the greatest gains from CSFP in terms of improved food security. Senior housing recipients have the food boxes delivered directly to them, which is likely an important benefit for this population of frail, low-income seniors.

Because the survey inquired about prior food security status, this study potentially introduced recall bias. Future studies involving a prospective cohort design would further clarify effects of CSFP participation on food security status over time. In addition, in-depth interviews exploring participants' views on the program may help explain differences between sub-groups of this population. Analysis of subgroups, including the food pantry and senior housing populations,

Table 2. Food Insecurity Status of Survey Sample

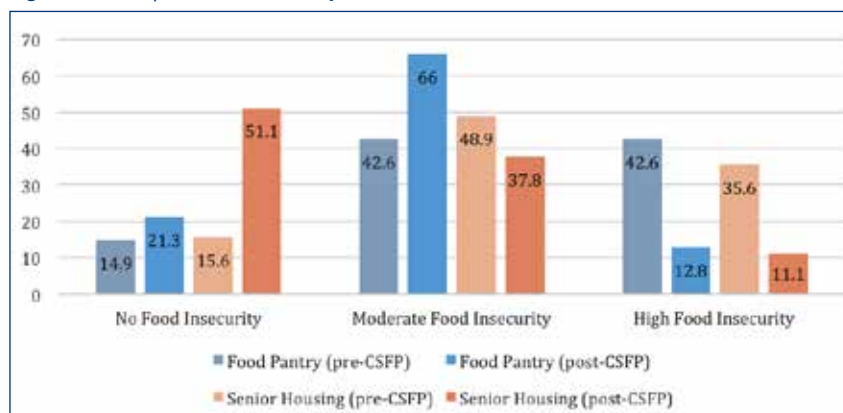
	Variable	Before Receiving Boxes n (%)	After Receiving Boxes n (%)	Chi-Squared Value	Chi-Squared P-Value
	Overall	78 (84.8)	59 (64.1)	15.4290	<0.001*
Site type	Food pantry	40 (85.1)	37 (78.8)	0.8000	0.3711
	Senior housing	38 (84.4)	22 (48.9)	14.0620	<0.001*
Gender	Male	27 (84.4)	21 (65.6)	4.1667	0.0412*
	Female	51 (85.0)	38 (63.3)	9.6000	0.0019*
Health Status	Self-reported good health	43 (81.1)	32 (60.4)	7.6923	0.0055*
	Self-reported poor health	35 (89.7)	27 (69.2)	6.1250	0.0133*
SNAP status	SNAP recipients	65 (84.4)	49 (63.3)	14.0620	<0.001*
	Non-SNAP recipients	13 (92.9)	10 (71.4)	0.8000	0.3711

*Indicates significant drop in food insecurity after program participation, $p<0.05$

Table 3. Food Insecurity Score by Site Type

	Food Pantry		Senior Housing	
Food insecurity status	Before Receiving Boxes n (%)	After Receiving Boxes n (%)	Before Receiving Boxes n (%)	After Receiving Boxes n (%)
No food insecurity	7 (14.9)	10 (21.3)	7 (15.6)	23 (51.1)
Moderate food insecurity	20 (42.6)	31 (66.0)	22 (48.9)	17 (37.8)
High food insecurity	20 (42.6)	6 (12.8)	16 (35.6)	5 (11.1)

Figure 1. Participant Food Insecurity Status



is also limited by the study's small sample size. Finally, while our study stratifies participants by baseline health status, no conclusions can be made about whether the program improves health. Food insecurity among the elderly has been associated with poorer nutritional intake and self-reported health status.¹² A follow-up study that tracks specific health and nutrition metrics would further delineate the relationship between CSFP participation and health.

Apart from the above limitations, it is important to caution that the results of this study may not be applicable outside of RI. Not all food banks operate similarly, and characteristics of recipients may differ in other states.

In conclusion, this study shows that the CSFP can have an impact on lowering food insecurity levels among RI recipients. As food insecurity levels of low-income elderly Rhode Islanders remain quite elevated, such programs can be an asset to address this issue. Furthermore, this study suggests that individuals receiving their food boxes at food pantries are particularly food insecure even after program administration.

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Review of Boundary Violations in Rhode Island, 2012–2018

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“Into whatever homes I go, I will enter them for the benefit of the sick, avoiding any voluntary act of impropriety or corruption, including the seduction of women or men, whether they are free men or slaves.” – Hippocrates

ABSTRACT

Boundary violations are serious occurrences that result in a breach of the physician-patient relationship. Boundary violations are regulated by the Rhode Island Board of Medical Licensure and Discipline (Board). A review of all disciplinary actions from 2012 through 2018 involving physicians found boundary violations relating to sexual misconduct the most common boundary violations. All disciplinary actions that pertained to boundary violations were isolated, and trends regarding gender, medical specialty, and outcome of action were assessed. Sexual boundary violations (n=15) represented 94% of all boundary violations during this time period. Psychiatrists (31.3%), internists (25%) and family medicine physicians (18.8%) were the most common specialties of those who had boundary issues. Loss of license occurred for all physicians who had sexual intercourse with a patient. Reinstatement of license was possible for some physicians after a comprehensive forensic psychiatry evaluation. Physicians are reminded of the ethical obligations we have to our patients and the profession and to maintain a professional relationship with their patients at all times. This type of professional misconduct is preventable and avoids injury to patients and to the medical profession.

INTRODUCTION

The mission of the Board is to protect the public and ensure professional practice standards. Periodically, the Board receives complaints alleging an improper relationship, or boundary violation, between a physician and a patient.

Physicians hold a unique position in this culture and are afforded certain privileges; the most paramount of privileges is to evaluate and manage patients. The physician-patient relationship is built and maintained on trust.¹ As part of this trust, there is a requirement to adhere to professional

standards and boundaries to maintain a therapeutic relationship that promotes healing.² Boundary violations, specifically when a physician engages in a sexual relationship with a patient, are specifically prohibited by Rhode Island law.³

METHODS

A review of all disciplinary actions involving Rhode Island licensed physicians from 2012 through 2018 was completed. This information is available on a publicly accessible website that displays all of the Board's disciplinary actions.⁴ All disciplinary actions involving boundary violations were analyzed for trends, including medical specialty, gender, loss of medical license, and reinstatement of license.

Individuals who did not lose their license were defined as individuals who had some other disciplinary action (e.g., reprimand) and/or had monitoring requirements like being required to have chaperones while with patients. The review also included an evaluation of what specific criteria were used by the Board to reinstate a physician's license.

RESULTS

Sixteen disciplinary actions from 2012 through 2018 involved physicians and boundary violations occurred. Boundary violations varied from receiving gifts from a patient to sexual intercourse with a current patient. Boundary violations represented 8% of all disciplinary actions during this time period. **Table 1** identifies the number of individuals within each medical specialty who were cited for boundary violations. The most commonly identified specialty among

Table 1. Boundary Violations by Specialty

Specialty	Number of physicians	Percentage
Anesthesiology	1	6
Cardiology	1	6
Family Medicine	3	19
Internal Medicine	4	25
Pulmonology	1	6
Unknown	1	6
Psychiatry	5	31
All	16	100

Table 2. Most Common Specialties With Boundary Violations

Specialty	Number of boundary violations	Prevalence of boundary violations
Psychiatry	5	1.70%
Internal Medicine	4	0.30%
Family Medicine	3	0.80%

those was psychiatry (31.3%). Internal medicine and family medicine followed at 25.5% and 18.8%, respectively. **Table 2** shows the prevalence of boundary violations within each medical specialty in Rhode Island. (Prevalence was determined by dividing the number of boundary violations, by the number of physicians in that specialty in Rhode Island). Among all psychiatrists practicing in Rhode Island, 1.7% have been cited for a boundary violation. In comparison, 0.3% of internal medicine physicians and 0.8% of family medicine physicians in Rhode Island have been cited in a boundary violations case.

Of the 16 boundary violations, 15 violations were classified as sexual misconduct, and 87% of sexual misconduct cases involved male physicians. Two sexual misconduct cases also involved physicians who were subsequently incarcerated for their actions by applicable jurisdictions outside the purview of the Board. Thirteen of the 16 physicians (81%) who had a boundary violation resulted in loss of license. Of the 5 physicians who achieved reinstatement of their medical license, the length of time between loss of license and reinstatement varied widely from 5-110 months, with an average of 49 months. Review of sexual misconduct cases showed that all physicians who had sexual intercourse with a patient lost their licenses, at least for a period of time.

DISCUSSION

The number of cases in this type of disciplinary actions is small, accounting for 16 cases; however, trends can be assessed for future guidance. It should be noted that although non-disciplinary actions, as determined by the Board, are not public, all cases determined to be a boundary violation resulted in a disciplinary action. Because all boundary violations resulted in a disciplinary action, each of the disciplined physicians was reported to the public via the department website and to the National Practitioner Data Bank.

From a legal perspective, there is general consensus on when a physician-patient relationship commences,⁵ and several court cases offer guidance on the nuances of this. One important and underlying concept is the physician-patient relationship is established as soon as the physician affirmatively acts in the patient's case and agrees to examine, diagnose, and/or treat the patient. Boundary violations, particularly those involving sexual misconduct, represent some of the most serious threats to the physician-patient relationship. Patients divulge sensitive information to

physicians and establish trust. Boundary violations jeopardize that trust and ultimately, negatively affects the quality of care a patient receives.

Although it is not clear why there is a higher prevalence of boundary violations among psychiatrists, it is evident the nature of treatment in the field of psychiatry results in a different physician-patient relationship. Although psychiatrists are trained to avoid sexual relationships with patients, this is not always maintained. Family medicine practitioners and internists also had a high prevalence of boundary violations. These three groups of physicians do have potential for ongoing therapeutic relationships with patients. These findings of increased prevalence on boundary violations being more common among these three specialties do mirror other reviews on this matter.^{6,7} A separate study which reviewed state medical board actions and the prevalence of boundary violations from other states, including California, New York, Oregon and a national database, demonstrated a prevalence of .02 to 1.6% of physicians.⁷ Although the numbers are small, this is similar to the prevalence we saw in our review.

Physician attitudes about Boundary violation have been reviewed as well; a review from 1973,⁸ revealed in an anonymous survey of 460 physicians of various specialties that 5-13% had engaged in erotic behavior with a patient. Additionally, 7.2% had engaged in sexual intercourse with a patient. A survey completed in 1992 among similar specialty physicians as our review revealed 9% had sexual contact with at least one patient.⁹ This suggests a disconnect between boundary violations that occur and those that are reported. It also suggests a disturbing ethical gap in knowledge regarding boundary violations.

Boundary violations are serious breaches; 81% of all boundary violations resulted in loss of license, at least for some period of time, reflecting how serious the Board takes these matters. Of those physicians who did not lose their license, the violation did not involve sexual intercourse and was reflective of an inappropriate exam or other violation.

Reinstatement of a medical license for a physician who commits a boundary violation is possible; however, the physician must generally undergo a thorough investigation and comprehensive forensic psychiatry evaluation. Circumstances that affected reinstatement were relevant to severity of boundary violation and Respondent's efforts to achieve reinstatement. All physicians who were reinstated had to agree to some form of formal monitoring for varied periods of time to assure the Board of compliance. Several physicians who lost their license chose not to seek reinstatement for a variety of reasons; such as health issues, not willing to undergo assessment, chose to retire or other reason. This illustrates how unique each boundary violation case is and the path to reinstatement is not always achievable.

Those physicians who underwent comprehensive evaluations generally occurred at specialized facilities, such as

the Santé Center for Healing¹⁰ or Acumen Assessments.¹¹ These evaluations generally involve coordination with the Rhode Island Physicians Health Program. It is common with this type of assessment that all investigative documents are reviewed by a forensic evaluator, victims are interviewed when appropriate, polygraph assessments are administered, and other individuals who can speak to the character of the accused physician are interviewed. This comprehensive evaluation is vital to the Board so they can assess if the physician is worthy of the trust bestowed by the Board and ultimately their patients.

There are a variety of reasons why sexual misconduct occurs. Some of the most common rationale include physician impairment, undiagnosed psychopathology, and character flaws. These types of occurrences are serious ethical and moral lapses in the judgment of the offending physician.^{12,13} Therefore, the causes of a sexual boundary violation must be investigated in order to avoid future occurrences.

There is no generally accepted length of time after which it is considered acceptable to engage in a romantic or sexual relationship, with a former patient. However, the American Psychiatric Association's position on the matter clearly states that it is *never* acceptable for a psychiatrist to engage in a romantic relationship with a former patient.¹⁴ The Board has adopted a similar position and promulgated a regulation to this effect in October 2018.¹⁵

Physicians who find themselves in a romantic relationship (sexual or non-sexual) with a patient should terminate the physician-patient relationship immediately and arrange for a responsible transition of care for the patient. Physicians are also advised to self-report to the Rhode Island Medical Society Physicians Health program for an evaluation. Physicians may also want to report their misconduct to the licensing board proactively, which would reflect a measure of professional insight into the misconduct.

It is important to remember the wisdom of Hippocrates, "*avoiding any voluntary act of impropriety or corruption, including the seduction of women or men, whether they are free men or slaves.*" Physicians are advised to avoid any appearance of impropriety and maintain a professional relationship with patients at all times. This type of professional misconduct is preventable and avoids injury to patients and to the medical profession.

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Toxoplasma Neuroretinitis

BRIAN MAC GRORY, MB, BCh, BAO, MRCP; DERRICK CHENG, BSc, BA; ADENIYI FISAYO, MD

A 38-year-old female presented with painless monocular vision loss in her left eye. She was otherwise entirely healthy and took no medications. Physical examination revealed a visual acuity of 20/20 in her right eye and 20/50 in her left eye. Her pupils constricted from 4mm to 3mm bilaterally and there was a left relative afferent pupillary defect. Her visual fields were full on the right side and she had a constricted superonasal and inferonasal visual field. She exhibited dyschromatopsia being able only to see the test plate on Ishihara testing (scored 0/14). Dilated ophthalmoscopy revealed severe swelling and hemorrhage of the left optic disc with surrounding subretinal swelling extending to the macula (**Figure 1**).

Examination of the contralateral eye was entirely within normal limits including no evidence of remote infection. Serum testing for inflammatory etiologies (including ACE, anti-aquaporin-4 antibody, ANCA and serum protein electrophoresis) and infectious etiologies (including bartonella antibodies, HIV antibodies, VDRL, lyme antibodies, leptospira antibody, Quantiferon Gold and mumps antibodies) was normal. Cerebrospinal fluid analysis demonstrated no leukocytosis or oligoclonal banding. Magnetic resonance

imaging (MRI) of her brain performed with intravenous gadolinium administration demonstrated no enhancement of her left optic nerve or evidence of demyelination in her brain. She was discharged with a diagnosis of idiopathic neuroretinitis.

When seen in follow-up 18 days later, her visual acuity had worsened – she was only able to count fingers in the left eye. Fundoscopic examination demonstrated vitreous cells, optic disc whitening, serous retinal detachment and phlebitis along the superior temporal arcade. An anterior chamber tap was performed. Clindamycin, trimethoprim-sulfamethoxazole and prednisone were commenced for empiric treatment of toxoplasma neuroretinitis. Toxoplasma PCR testing was positive in her aqueous fluid. Of note, she had no systemic manifestations of toxoplasmosis, including no fever, chills, malaise, headache, myalgia, rash or lymphadenopathy. Additionally, she ate only fully cooked meat and did not consume untreated water or raw vegetables. She did not have a cat in her home. At a follow-up visit 2 weeks later, her visual acuity had improved and fundoscopic examination was notable for a “macular star” (**Figure 2**).

Figure 1. Fundoscopic examination on the date of initial presentation. This image depicts severe swelling and hemorrhage of the left optic disc with surrounding subretinal swelling extending to the macula.

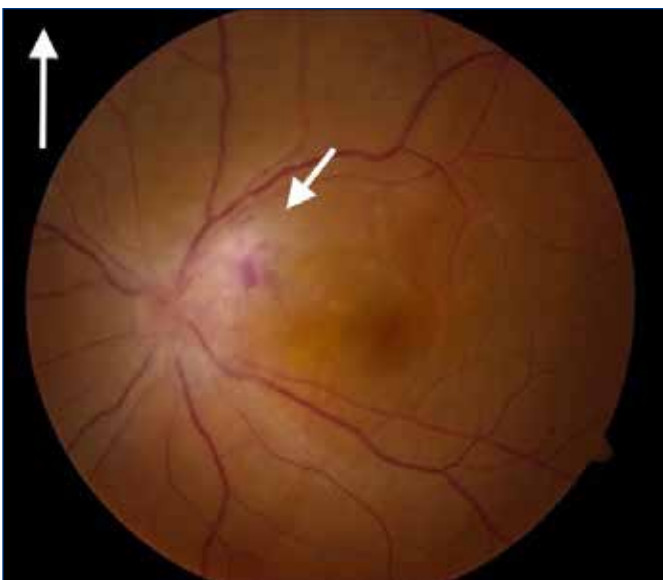
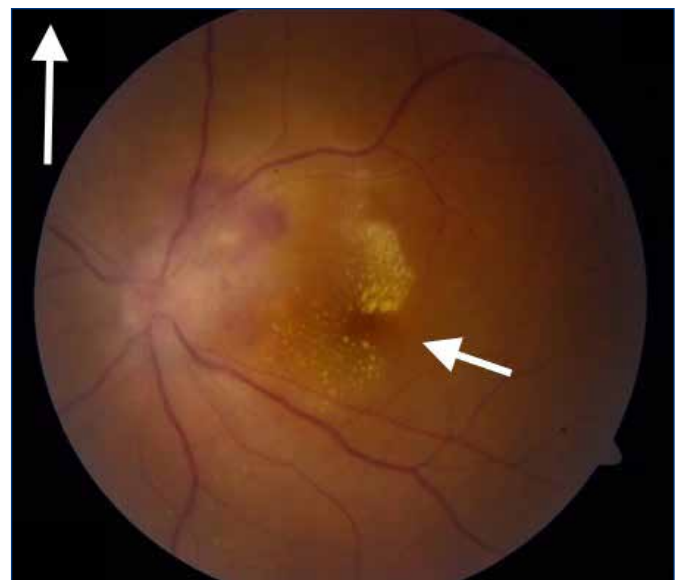


Figure 2. Fundoscopic examination at the time of last follow-up. This image depicts an exudative material in a radial pattern around the fovea. This so-called “macular star” is a characteristic sequel of toxoplasma neuroretinitis.



This case illustrates the importance of recognizing that significant optic disc swelling is atypical in demyelinating optic neuritis and the need to consider neuroretinitis in the work-up of painless monocular visual loss. Neuroretinitis describes inflammation of the vasculature in the region of the optic disc with ensuing retinal edema.¹ The findings on ophthalmoscopy are often difficult to distinguish from other cases of optic disc edema – such as raised intracranial pressure. There is no relationship between the development of neuroretinitis and a future risk of multiple sclerosis.²

The differential etiology of neuroretinitis includes bacterial, viral, fungal, protozoal and spirochaetal infection as well as systemic vasculitides and autoimmune disorders (such as sarcoidosis and polyarteritis nodosa). There are also a minority of cases in which recurrent idiopathic neuroretinitis occurs. *Bartonella henselae* (“cat scratch disease”) accounts for two-thirds of all cases attributed to infection. Reactivation of *Toxoplasma gondii* is a recognized cause of neuroretinitis and can be seen even in the immunocompetent³ and is known for causing bilateral and, in some cases, recurring neuroretinitis.

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Brief title: 8 words or less

Content: Relevant clinical information, findings, clinical course, and response to treatment if initiated. Limit: 400 words

Legends: All labeled structures in the image should be described and explained in the legend. Any identifying information should be removed from the image.

Author information: Names, professional degree, academic/hospital affiliations, address, email and telephone number.

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Identification and Description of Non-Fatal Opioid Overdoses using Rhode Island EMS Data, 2016–2018

LEANNE LASHER, MPH; JASON RHODES, MPA, AEMT-C; SAMARA VINER-BROWN, MS

INTRODUCTION

The Centers for Disease Control and Prevention (CDC) has identified drug overdoses as an epidemic that has been increasing steadily for more than a decade.¹ In 2017, Rhode Island had the tenth highest rate of drug overdose deaths in the country.² To help combat the epidemic, the Rhode Island Department of Health uses multiple sources of data to identify, track, and respond to changes in drug overdose trends, including the Rhode Island Emergency Medical Services (EMS) Information System (RI-EMSIS), which provides real-time surveillance of prehospital assessment and care for opioid overdoses.

Per Rhode Island EMS protocol, naloxone, a medication that can rapidly reverse an opioid overdose, can be administered to a patient with altered mental status if drug use is suspected or unknown.³ Because naloxone, commercially known as Narcan®, is commonly and appropriately used to rule out the occurrence of a drug overdose in patients with altered mental status, severe respiratory depression or apnea, administration of naloxone alone is not always an accurate indicator of overdose. In addition, differences in the data fields used to identify use of naloxone can result in different counts. To accurately and systematically identify opioid overdose-related EMS runs, the Rhode Island Department of Health (RIDOH) developed a case definition⁴ based on primary/secondary impression, naloxone selected in a medication given dropdown field, response to medication as indicated in a dropdown field, and key word search of the report narrative. Dropdown fields provide categorized data that are easy to summarize, while reliance on key word search of the narrative requires a significant amount of testing to ensure accuracy. In 2018, the RIDOH case definition for opioid overdose identified 1,470 overdoses (719 had both mention of naloxone in the narrative and selected in the medication given dropdown field, 62 had naloxone selected in the dropdown but not in the narrative, and 679 had mention of naloxone in the narrative but not in the dropdown). There were an additional 1,060 EMS runs in 2018 that had mention of naloxone in the narrative or in the dropdown field that did not meet the case definition. Based on record reviews, using naloxone administration, without consideration of other factors, may result in either an overcount or incorrect identification of overdoses. Accurate identification of overdoses is important to ensure appropriate informing of public health practice.

METHODS

Rhode Island EMS data for this analysis are from RI-EMSIS. National EMS Information System (NEMSIS) version 3.4 compliant data from January 2016 to November 2018 are current as of 12/5/18 and December 2018 data are current as of 1/23/19. NEMSIS version 2.2.1 compliant data for 2016 are current as of 10/22/18, 2017 data are current as of 2/1/19, and January–October 2018 data are current as of 1/24/19; data after October 2018 are not included. However, all data are preliminary and subject to change. For consistency with CDC reporting requirements, an EMS run is excluded if it is an interfacility transfer, the patient is determined to be biologically dead upon arrival, or the patient is under 11 years of age. To determine the number of repeat overdoses, records were matched using first letter of patient's first name, first five letters of the patient's last name, date of birth, and gender. Records were excluded if the name was unknown or an obvious false name (e.g. Jane Doe) or date of birth was missing; this accounted for approximately two percent of opioid overdose records. When location of incident was missing or indicated as "other location" (121 in 2016, 56 in 2017, 21 in 2018), narrative reports and incident addresses were reviewed to determine location where possible. All analyses were conducted using SAS 9.4. Opioid overdose-related EMS runs are herein referred to as opioid overdoses or overdoses.

RESULTS

Opioid overdose trends

There was a decline in non-fatal and fatal opioid overdoses between 2016 and 2018. The number of opioid overdose-related EMS runs in Rhode Island decreased by 12.7% between 2016 and 2018, and the rate of opioid overdoses per 100 EMS emergency responses decreased steadily from 1.3 in 2016 (1,684 of 130,125) to 1.2 in 2017 (1,374 of 115,371) and 1.1 in 2018 (1,470 of 133,545), in persons aged 11 and over when the patient was not determined to be biologically dead at the scene. This follows a similar trend compared to opioid overdose-related Emergency Department (ED) visits; however, the lower number of EMS reports in 2017 and early 2018 are due to missing data related to a system transition from NEMSIS version 2.2.1 to version 3.4, which should be rectified in 2019. Differences between EMS and ED data may be related to a variety of factors such as data quality

and completeness, differences in overdose case definitions, variations in population (a patient may arrive at the ED via means other than EMS), and transport refusal. However, the number of opioid overdoses where the patient refused treatment and/or transport represents a small proportion of overdoses with 0.5% (9) in 2016, 1.0% (14) in 2017 and 1.1% (16) in 2018. The number of fatal opioid-involved overdoses, defined by the Office of the State Medical Examiners as having an opioid listed as a contributing cause of death, decreased by 10%, from 211 opioid-involved overdose deaths in January-September 2016 to 190 in January-September 2018. (**Figure 1**). The proportion of fatal overdoses of all opioid-involved ED visits decreased slightly from 17.9% in 2016 (February–December) to 16.9% in 2017 and 16.7% in 2018 (January–October).

Demographics

In 2018, when looking at six categories of age groupings, persons ages 25 to 34 had the largest percentage of opioid overdoses, 33.7% (496). (**Figure 2**). Males experienced a higher proportion, 67.5% (992), than females. This pattern was seen across all age groups. Race and ethnicity are not reported due to a high number of missing values, 79.8% in 2018.

Naloxone administration route and dose

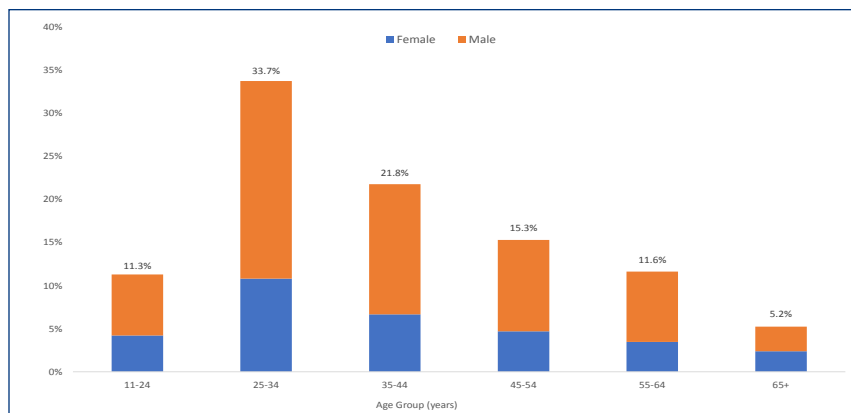
Rhode Island EMS protocol for administration of naloxone by advanced life support practitioners is to give 0.4 mg to 2 mg via intranasal, intravenous, or intramuscular routes every 3-5 min until adequate ventilation is restored or a total of 10 mg is administered.⁴ Of 1,470 overdoses in 2018, 791 records (53.8%) have valid information on medication given. Because multiple doses of naloxone may be given per overdose, 1,006 administrations of naloxone were documented. The largest percentage of naloxone administrations were intranasal, 46.5% (468), while 44.3% (446) were intravenous, 7.3% (73) intramuscular, and 1.9% (19) had an undocumented route of administration. The average total mg of naloxone given per opioid overdose was 2.7 in 2018 (of 789 records with valid information on dose), which increased slightly from 2.4 in 2016 (of 1,228 records with valid information on dose). Of 791 opioid overdoses with valid data on medication given, 26.4% had multiple naloxone administrations (MNAs). Monitoring MNAs has been proposed as a real-time indicator of opioid potency.⁵

Figure 1. Number of non-fatal and fatal opioid overdoses in Rhode Island, by year, month, and data source, 2016–2018



Source: RI Center for the Office of the State Medical Examiners; Emergency Department 48 hour Reporting System; RI-EMSIS

Figure 2. Percent of opioid overdoses by age group and gender, 2018, Rhode Island



Source: RI-EMSIS

Note: Opioid overdoses with unknown age (1.0%) are not shown in the figure above.

Overdose reversal

Opioid overdoses are reversed when naloxone is administered and the patient's level of consciousness or respiratory function improves. Current challenges with data completeness make it difficult to accurately monitor the number of reversals. Of 1,470 opioid overdoses in 2018, valid data on medication given and medication response are available for 46.0% (673) of records. Of these 673 opioid overdoses, 89.9% (605) indicated that the patient improved and 10.1% (68) had no change or their condition worsened.

Location

Among opioid overdoses that occurred in Rhode Island in 2018, 61.2% (900) occurred in a private setting such as personal residence. However, between 2016 and 2018, there was a 15.5% increase in publicly occurring overdoses from 29.6% (499) to 34.2% (503), which includes a variety of settings, such as streets, parking lots, parks, restaurants, stores,

beaches, fire stations, etc. (Figure 3). Based on preliminary data, the percent of opioid overdoses that occurred in a public setting continued to increase to 37.0% in January 2019. In 2018, 19.0% (279) of all opioid overdoses occurred on a street, roadway, parking lot, service area, gas station, or in a vehicle. Street or roadway accounts for 13.9% (205). Please note that records with an incident type of street or roadway do not further specify if the patient was in a vehicle.

Repeat Overdose

In calendar year 2018, after excluding records that did not have valid names and dates of birth, there were 1,437 opioid overdose incidents that occurred among 1,288 patients. The percent of patients who experienced repeat overdoses within the calendar year was 9.9%. Of these patients, 7.2% (93) experienced two opioid overdoses within the calendar year, and 1.7% (22) experienced three or more. Patients who experienced repeat overdoses accounted for 18.4% (264) of the 1,437 overdoses with valid name and date of birth in 2018.

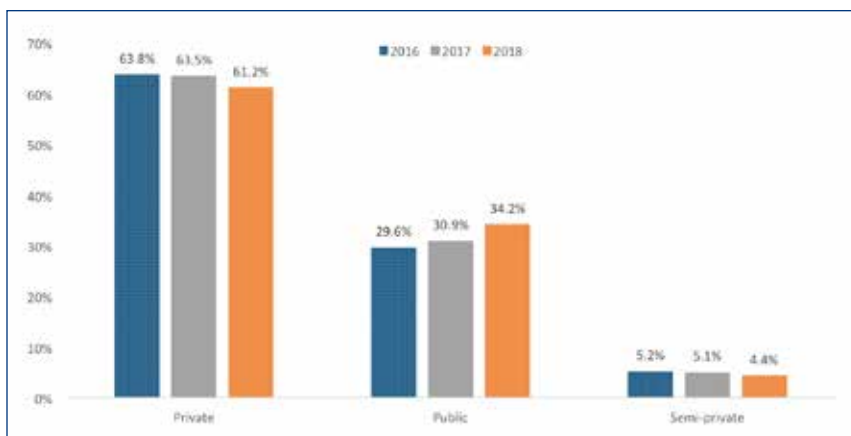
The number of repeat overdoses was assessed among a cohort of 1,288 patients who experienced an opioid overdose in 2018. If a patient had multiple opioid overdoses within 2018, the last overdose was selected. Among the cohort, 13.2% (170) had at least one prior opioid overdose within one year and patients with two or more overdoses accounted for 2.6% (34). (Figure 4). The maximum number was 9 prior opioid overdoses. In a two-year period prior to the 2018 overdose, 16.8% (216) of patients had experienced a previous opioid overdose.

Of the 2018 cohort, 38.6% (318) had a prior involvement with EMS, which may or may not have been overdose related, within one year prior to their overdose. (Figure 5). More specifically, 17.5% (144) had one involvement with EMS prior to their 2018 opioid overdose, 11.9% (98) had 2–3 prior involvements, 7.0% (58) had 4–10 prior involvements and 2.2% (18) had 11 or more. The maximum number of EMS interactions in the year prior to the 2018 opioid overdose was 101.

DISCUSSION

Carefully analyzed EMS data provide important insight into the opioid crisis in Rhode Island and can inform public health response. Benefits include monitoring trends in overdoses, identifying

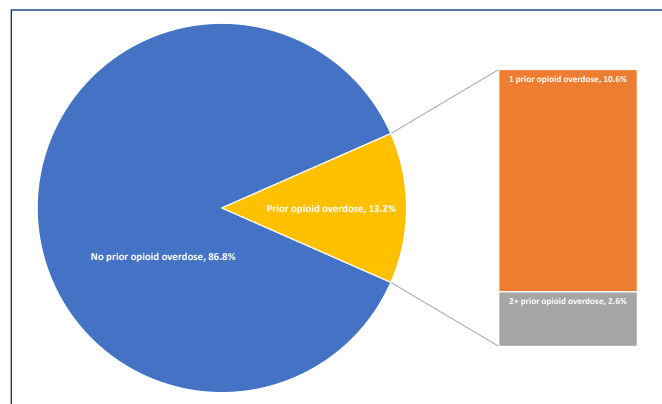
Figure 3. Percent of opioid overdoses by incident location type and year of incident, Rhode Island, 2016–2018



Source: RI-EMSIS

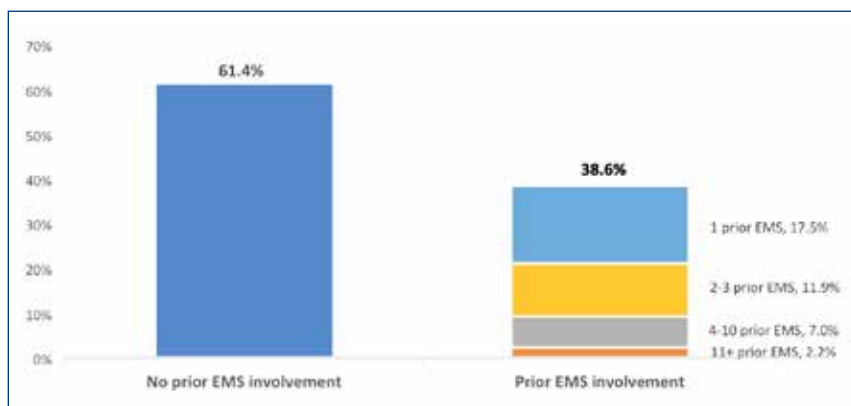
Note: Incident location was unknown in 1.4% of opioid overdoses in 2016, 0.5% in 2017 and 0.1% in 2018. Semi-private includes places such as hospital, assisted living facility, nursing home, prison, residential institution, hotel/motel.

Figure 4. Percent of patients who had an opioid overdose within one year prior to their 2018 opioid overdose, by number of prior opioid overdoses, Rhode Island



Source: RI-EMSIS

Figure 5. Percent of patients who had involvement with EMS for any reason within one year prior to their 2018 opioid overdose, Rhode Island



Source: RI-EMSIS

populations at risk of non-fatal overdose and repeat non-fatal overdoses, providing an assessment of pre-hospital treatment and location of overdose, and allowing real-time surveillance. EMS data can be used alongside other data sources to monitor trends in opioid overdoses. Between 2016 and 2018 there was a decrease in opioid-involved overdoses seen across multiple sources. In addition, among those in Rhode Island who experienced an overdose, the proportion that resulted in death decreased slightly during this timeframe. It is possible that these decreases may be related to an increase in naloxone availability among the general public, either by reducing the number of overdoses that result in death or reducing the number of times emergency care is sought after an overdose. In 2018, 16,771 naloxone kits were distributed in Rhode Island through pharmacies, clinical settings, and community-based organizations, which is an increase from 6,341 kits in 2016.⁶ EMS services recently began tracking administration of naloxone prior to their arrival. However, fear of arrest may prevent some people from seeking professional medical help after administering naloxone.

Seeking emergency care after an overdose is important and providers should encourage patients to call 9-1-1 if they experience or witness an overdose, and remind them that Rhode Island's Good Samaritan Overdose Prevention Act⁷ protects bystanders from liability if they help someone who may be experiencing an opioid overdose. Providers can also have a conversation with patients about the importance of obtaining naloxone from the pharmacy if they are worried about themselves, a loved one, or simply want to be able to respond to an overdose. Rhode Island legislation allows lay people to get naloxone from pharmacies without a prescription through a collaborative pharmacy practice agreement.⁸ All health insurers in Rhode Island cover at least one type of generic naloxone with a no cost/low-cost co-payment. In addition, July 2018 updated regulations require prescribers of Schedule II controlled substances to co-prescribe naloxone in three different high-risk clinical scenarios: 1) Prescribing an opioid individually or in aggregate with other medications, greater than or equal to 50 oral MMEs/day; 2) Prescribing any dose of an opioid or a benzodiazepine to a patient concurrently, or to a patient who has been co-prescribed either in the past 30 days; and, 3) Prescribing any dose of an opioid to a patient who has a history of opioid use disorder or overdose.⁹

Some research suggests that patients who have survived a non-fatal overdose are at a greater risk of experiencing a fatal overdose.¹⁰⁻¹² Among a cohort of patients who experienced an overdose in 2018, 13.2% had experienced a previous opioid overdose within a year prior. This is in line with research in other states.¹³ Approximately one in three patients who experience an opioid overdose had at least one involvement with EMS in the year prior to overdose. EMS providers can serve an important role in providing care and interventions. Since community paramedicine programs are allowed by

Rhode Island Statewide EMS protocol, RIDOH will continue to encourage local communities to develop plans to address the overdose crisis by performing preventative interventions such as follow-up visits within the community and promotion of home naloxone kits. RIDOH is also exploring options for EMS to leave Narcan behind in instances of transport refusal or with family and friends after the transport of an overdosed patient. Future analyses will explore if repeat overdoses are a risk factor for fatal overdose in Rhode Island.

Monitoring the location of overdoses can be helpful in providing targeted services. In 2018, a majority, 61.2%, of opioid overdoses occurred in a private setting, which is consistent with national data from 2012-2015.⁵ However, the percent of overdoses that occurred in a public setting increased by 15.5% between 2016 and 2018, and preliminary data for January 2019 show a continued increase. This increase may be related to an increase in overdoses that occur in parking lots or service areas. Approximately one in five opioid overdoses occurred on a street or roadway or in a vehicle-related setting. Future analyses will explore cluster analyses of overdose location, with a focus on the location of publicly occurring overdoses.

Limitations of this report include challenges with data quality and completeness. There are data missing from a portion of 2017 due to a system transition from NEMSIS version 2.2.1 to version 3.4, although the issue should be rectified in the first quarter of 2019. Training of EMS providers to improve quality of data reporting is an ongoing effort, with emphasis on improved narrative composition and comprehensive use of dropdown menus. The RIDOH opioid overdose case definition is continually reviewed and modified to ensure accurate identification of opioid overdoses, and improvements to the process for identifying repeat overdoses will be explored.

In addition to the current uses of EMS data, RIDOH has been working to improve and develop additional capacity for EMS and other data. In January 2019, new regulations required reporting of EMS incidents within two hours after completion of the call. With this change in regulation, RIDOH anticipates implementing, in 2019, a real-time automated overdose outbreak detection system with web-based dashboards and alerting features for EMS data. Use of EMS data, in combination with other data sources, will hopefully provide information regarding the opioid epidemic in Rhode Island that can be helpful for informing policy decisions and public health interventions.

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VITAL STATISTICS

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DIRECTOR, RHODE ISLAND DEPARTMENT OF HEALTH
COMPILED BY ROSEANN GIORGIANNI, DEPUTY STATE REGISTRAR

PUBLIC HEALTH

Rhode Island Monthly Vital Statistics Report Provisional Occurrence Data from the Division of Vital Records

VITAL EVENTS	REPORTING PERIOD		
	JULY 2018	12 MONTHS ENDING WITH JULY 2018	
	Number	Number	Rates
Live Births	994	11,641	11.0*
Deaths	826	10,372	9.8*
Infant Deaths	7	67	5.8#
Neonatal Deaths	6	51	4.4#
Marriages	719	6,668	6.3*
Divorces	261	3,114	2.9*
Induced Terminations	179	1,818	156.2#
Spontaneous Fetal Deaths	57	841	72.2#
Under 20 weeks gestation	53	780	67.0#
20+ weeks gestation	4	61	5.2#

* Rates per 1,000 estimated population

Rates per 1,000 live births

Underlying Cause of Death Category	REPORTING PERIOD			
	JANUARY 2018	12 MONTHS ENDING WITH JANUARY 2018		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	224	4,501	425.7	6,225.5
Malignant Neoplasms	182	4,230	400.1	10,559.0
Cerebrovascular Disease	51	901	85.2	1,357.5
Injuries (Accident/Suicide/Homicide)	76	1,793	169.6	26,194.5
COPD	57	1,022	96.7	880.0

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.

(b) Rates per 100,000 estimated population of 1,056,298 (www.census.gov)

(c) Years of Potential Life Lost (YPLL).

NOTE: Totals represent vital events, which occurred in Rhode Island for the reporting periods listed above.

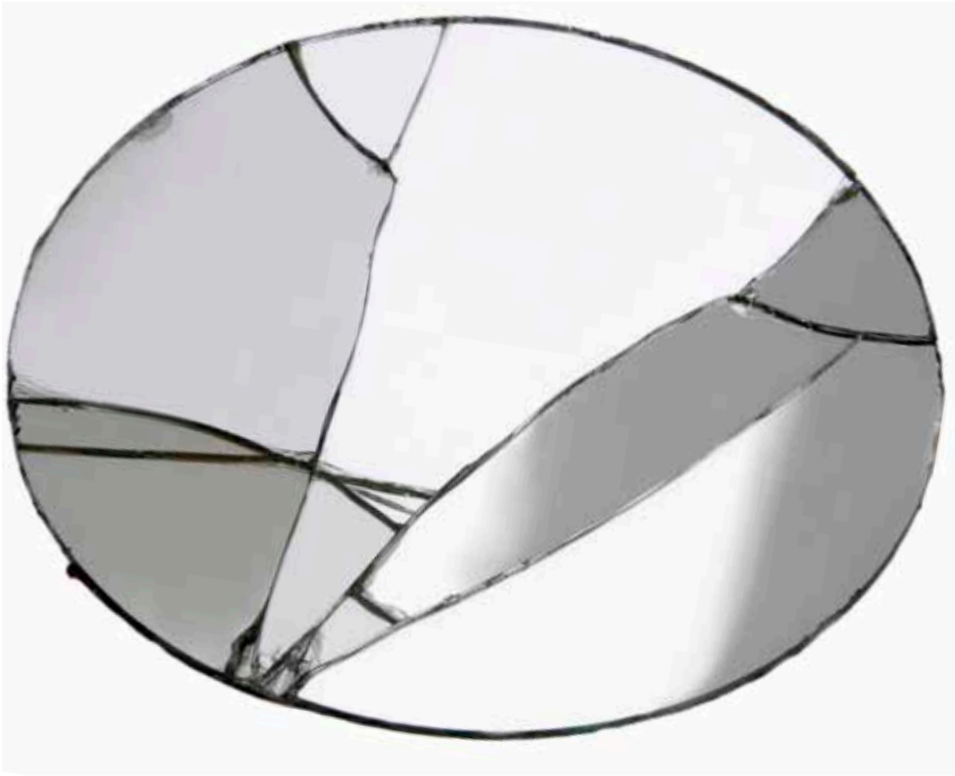
Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.

ADDITIONAL VITAL STATISTICS REPORTS

May 2018

June 2018

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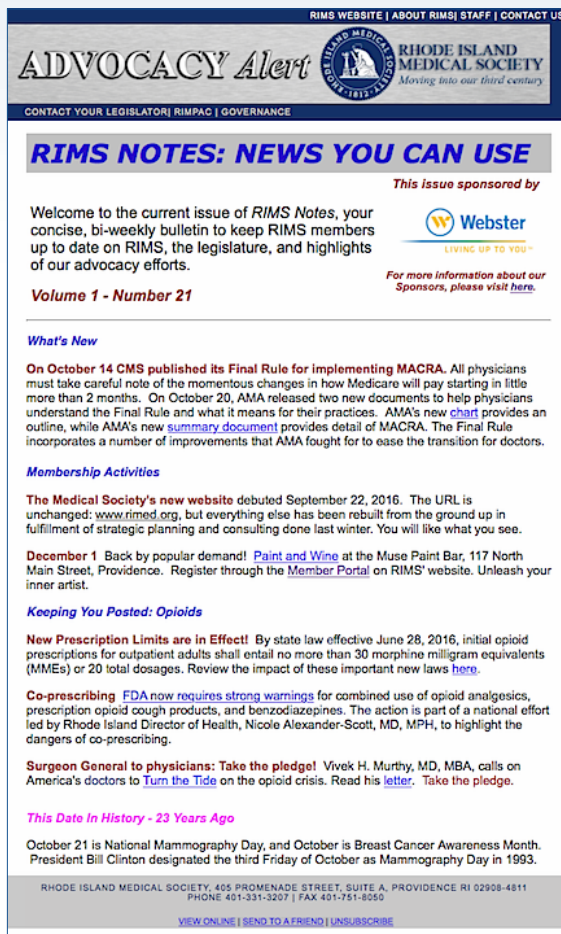
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Working for You: RIMS advocacy activities

February 1, Friday

SIF (Safe Injection Facility) presentation,
The Miriam Hospital

February 4, Monday

Meeting with ambulance company
regarding community health worker
engagement to reduce transport to hospitals

Meeting with RIACEP and HARI
regarding quality reporting.

RIMS Council Meeting:
Peter A. Hollmann, MD, President

February 5, Tuesday

RIMS Physician Health Committee:
Herbert Rakatansky, MD, Chair

OHIC Market Stability Workgroup:
Peter A. Hollmann, MD, President

Health Services Council regarding
Director's presentation

Meeting with House leadership
regarding legislation

Legislative hearings

February 6, Wednesday

Department of Health hearing on the use
of cannabis for Opioid Use Disorder

Conference call with Lifespan legal
regarding legislation on Comprehensive
Discharge Planning Statute

Workers Comp Advisory Council meeting
Legislative hearings

February 7, Thursday

Legislative hearings

House Majority Leader Shekarchi
fundraiser

Meeting with various specialty societies
regarding adult use of cannabis

February 8, Friday

Conference call regarding Mental Health
First Aide in South County

Meeting with RI ACEP and Governor's
office regarding 911 dispatch protocols

February 11, Monday

Meeting with RI ACEP regarding
advocacy day

February 12, Tuesday

AMA National Advocacy Conference,
Washington, DC: Christine Brousseau, MD,



Dr. Nicole Alexander-Scott, Director, RI Department of Health, met with representatives of emergency medicine, family medicine, internal medicine, surgery, ophthalmology, and PAs on February 25 to discuss revised DOH processes for reporting and investigating medical errors made in facilities.

Vice President, and Heather Smith, MD,
AMA Council on Legislation

Meeting with Congressional offices

February 13, Wednesday

Board of Medical Licensure and Discipline

Governor's Overdose Prevention
and Intervention Task Force:

Sarah Fessler, MD, Past President

Legislative hearings

Senate Majority Leader McCaffrey
fundraiser

February 14, Thursday

RIMS annual Health Care Lobbyists
meeting

Interview with Department of Health
consultants regarding closure of
Memorial Hospital

CMS webinar regarding new Part D
Opioid Overutilization Policies

Governor's press conference
regarding gun safety

SIM State Innovation Model:
Peter A. Hollmann, MD, President

Legislative hearings

February 15, Friday

Call with Department of Labor and
Training regarding new *AMA Guides® to
the Evaluation of Permanent Impairment*

February 18–22, Monday–Friday

School Vacation Week,
General Assembly not in session

February 19, Tuesday

Meeting with OHIC regarding integrated
mental health study

February 20, Wednesday

Primary Care Physician Advisory
Committee

Meeting with Department of Health
regarding harm reduction center
legislation

February 21, Thursday

Meeting with RI Thoracic Society,
Newport Hospital, regarding legislation

February 22, Friday

Diabetes Prevention Program
conference call

February 25, Monday

Governor's Overdose Prevention and
Intervention Task Force launching
Nalox Box, Amos House

Director of Health briefing at RIMS
regarding clinician self reporting to
Patient Safety Organizations (PSO)

February 26, Tuesday

Meeting with the RI Health Care
Association

Meeting with Connecticut Hospital
Association and Hospital Association of
Rhode Island regarding patient safety,
physician well-being, and state regulatory
and disciplinary activities

Legislative Hearings

February 27, Wednesday

Diabetes Prevention Program
Stakeholder Network meeting

Legislative Hearings

WLNE/ABC 6 Opioid Forum,
Brown University

February 28, Thursday

RIMS Blue Cross Blue Shield of RI
meeting: Peter A. Hollmann, MD,
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Legislative Hearings

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Contact Marc Bialek for more information: 401-331-3207
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Neighborhood Health Plan of Rhode Island is a non-profit HMO founded in 1993 in partnership with Rhode Island's Community Health Centers. Serving over 185,000 members, Neighborhood has doubled in membership, revenue and staff since November 2013. In January 2014, Neighborhood extended its service, benefits and value through the HealthSource RI health insurance exchange, serving 49% the RI exchange market. Neighborhood has been rated by National Committee for Quality Assurance (NCQA) as one of the Top 10 Medicaid health plans in America, every year since ratings began twelve years ago.

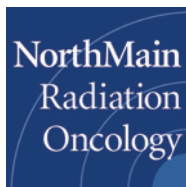


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RIPCPC is an independent practice association (IPA) of primary care physicians located throughout the state of Rhode Island. The IPA, originally formed in 1994, represent 150 physicians from Family Practice, Internal Medicine and Pediatrics. RIPCPC also has an affiliation with over 200 specialty-care member physicians. Our PCP's act as primary care providers for over 340,000 patients throughout the state of Rhode Island. The IPA was formed to provide a venue for the smaller independent practices to work together with the ultimate goal of improving quality of care for our patients.



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Urogynecology, gynecologic oncology teams from Women & Infants bring care, training to women of Rwanda



Providers from Women & Infants Program in Women's Oncology are planning to develop a cervical cancer-screening program in Rwanda. Pictured on a recent visit, left to right, are nurse practitioner **Heather Murphy, NP**; gynecologic oncology fellow **Lindsay Beffa, MD**; **Darius Rokundo Ezechy**, a medical student in Rwanda whose mother had cervical cancer and is studying to become a gynecologic oncologist to improve the access to screening and treatment for Rwanda women; gynecologic oncologist **Katina Robison, MD**; and gynecologic oncologist **Elizabeth Lokich, MD**.

EACH YEAR IN SUB-SAHARAN AFRICA, IT IS estimated that more than 33,000 women develop obstetric fistulae and subsequent urinary and/or fecal incontinence. Unfortunately, these women are currently not able to be adequately repaired by local physicians due to lack of training and resources.

Since 2005, **B. STAR HAMPTON, MD, FACOG**, has led a team from Women & Infants Hospital's Division of Urogynecology and Reconstructive Pelvic Surgery on a trip to Rwanda with the International Organization for Women and Development (IOWD). This year the team from Women & Infants Hospital worked in Kigali, Rwanda, where they served for two weeks at Kibagabaga Hospital with a team of American surgeons, anesthesiologists, and nurses. They collaborated with and trained Rwandan physicians, medical students, and nursing staff, teaching them post-surgical care for the women, as well as basic anatomy, surgical preparation, sterility concepts, evaluation, and surgical approaches.

Dr. Hampton's goals are also to give physicians in training global health ex-

perience and exposure to advanced pelvic surgery. Each year the Division sends the senior fellow with Dr. Hampton, and this year she was joined by fellow **SARAH NAPOE, MD**. Nurse practitioner **LEAH MOYNIHAN, NP, MSN**, also joined the team this year, as she has for the past four years.

For the consecutive second year, Dr. Hampton was joined by a team from Women & Infants Program in Women's Oncology, led by gynecologic oncologist **KATINA ROBISON, MD**.

This trip was intended for information gathering so the oncology team could develop a cervical cancer-screening program for the women of Rwanda – something which does not currently exist. As a result, most women present with cancers that are beyond surgical treatment and need to go to Uganda for treatment, where resources are also limited. However, once the women of Rwanda found out about their arrival, they showed up at the hospital in search of screenings for cervical cancer. The team screened more than 100 women – almost none of whom had ever been screened before, and found lesions



Dr. Star Hampton of Women & Infants Hospital successfully treated Rwanda native Alexia for obstetric fistula in February 2016. Alexia has since become an advocate for the International Organization for Women and Development and is now able to support her family through her sewing.

on almost half of the women, a significantly higher rate than here in the U.S.

According to Dr. Robison, "We need to find women before cancers are past treatment. We believe that a screening program will affect thousands – and ultimately millions – of women in Rwanda."

Dr. Robison explained that they want to develop a program that would 1.) train nurses in the health centers on how to do a visual inspection with acetic acid to look for pre-cancerous lesions; 2.) train the doctors at the hospital in how to do a LEEP procedure, a minor surgical procedure to remove the lesions; 3.) work with pathology on how to identify lesions when they are still treatable. The plan is to have teams visit Rwanda at least three times per year while holding monthly tele-health conferences throughout the year. ❖



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Roger Williams Medical Center opens new Emergency Department

On February 14th Roger Williams Medical Center opened its new, 12,000 square foot Emergency Room, part of a \$15.1 million project to create an entirely new, comprehensive emergency department serving the metropolitan Providence area.

This 12,000 square foot facility features:

- 22 total rooms, including FastTrack section, Isolation and bariatric rooms, dedicated trauma room
- Brand new equipment and emergency medicine technology
- Innovative triage and patient flow system
- Comfortable waiting area that includes a Wi-Fi countertop section
- Enhanced safety and security technology

Roger Williams handles more than 32,000 emergency and urgent care visits each year. The new ER features a new system involving a Pivot Nurse, who greets every arriving rescue patient to perform an immediate evaluation and clinical assessment. This new system will improve patient flow and avoid needless delay in treatment



The second phase of this project, to be completed later this year, includes the complete renovation of the former emergency room space to provide:

- 6 specialized behavioral health treatment rooms
- First Responders Room
- Additional infrastructure space

DR. DAREN GIRARD, Medical Director of Emergency Services for Roger Williams and CharetCARE, stated "the new emergency room will be a vital support to the care we provide to our patients by enabling or integrated team to have the latest emergency medical technology and modern, spacious environment within which to provide it." ❖



Southcoast Health launches latest image guided technology for spinal implants



Schrynel D'Mello, a clinical engineer with 7D Surgical and Dr. Matthew Philips of the Spinal Surgery team at St. Luke's Hospital get a better look at a patient's anatomy with 7D Surgical Machine-vision Image Guided Surgery technology.

NEW BEDFORD – St. Luke's Hospital Brain & Spine Surgery is the first in Massachusetts to use the only non-radiation surgical imaging system available for the placement of spinal implants.

The 7D Surgical Machine-vision Image Guided Surgery technology (MvIGS) for spinal procedures guides the surgeon

with a highly detailed three-dimensional image taken in just four seconds. This replaces a radiographic image taken intermittently during traditional robotic surgery (fluoroscopy). The image created by the system is matched up digitally with the patient's existing pre-operative scan to create a seamless, real time image of the patient's anatomy.

"As a spinal surgeon, the 7D technology provides me with more information when placing hardware in the spine, because I can see the anatomy in 3D as opposed to the 2D intraoperative images taken with standard fluoroscopy," said **DR. MATT PHILIPS**, neurosurgeon at St. Luke's Hospital. "The system also spares the patient and surgical team exposure to the harmful radiation that comes with radiographic imaging associated with traditional robotic approaches."

Scans taken during standard fluoroscopic spinal surgery can take 20 minutes to an hour, prolonging exposure to radiation. The 7D Surgical system uses sophisticated camera technology, similar to self-driving cars, to create a three-dimensional photographic image in three to four seconds resulting in shorter more efficient procedures.

"The patient really benefits," said Philips. "Because we can image the patient so much quicker we are dramatically reducing the time the patient spends in surgery."

Southcoast Health is the first healthcare system in Massachusetts to offer this technology and the second in New England. ♦



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URI nursing study shows benefits of delayed umbilical cord clamping on brain development in healthy babies

DAVID LAVALLEE

KINGSTON – A five-minute delay in the clamping of healthy infants' umbilical cords results in increased iron stores and brain myelin in areas important for early-life functional development, a new University of Rhode Island nursing study has found.

"When we wait five minutes to clamp the cords of healthy babies, there is a return of the infant's own blood from the placenta, and one of the results is a return of up to 50 percent of the baby's iron-rich blood cells," said URI Professor of Nursing **DEBRA A. ERICKSON-OWENS**, a certified nurse-midwife, who conducted the study with **JUDITH S. MERCER**, also a midwife and URI nursing professor emeritus. "So when the brain needs red blood cells (and iron) to make myelin, the robustness of the iron stores make a big difference," Erickson-Owens said.

The study, published in the December issue of *The Journal of Pediatrics* and funded by a \$2.4 million National Institutes of Health grant, challenges the practice of immediate cord clamping, which is still widespread.

"I presented six times (at major conferences) on this topic last spring, and I am still concerned with the number of clinicians who do not put this evidence-based research into their day-to-day practice," Erickson-Owens said. "In fact, the American College of Obstetrics and Gynecology said in January 2017 that a one-minute delay is enough for healthy babies.

"Our study shows that waiting five minutes or more before clamping the umbilical cord, while infants are held skin-to-skin with the mother, leads to more myelin development," Erickson-Owens said. "This is a low-tech, low-cost technique that we believe can mitigate iron deficiency and vulnerability to anemia.

"No other studies have been published on the association of the timing of cord clamping with early brain development, specifically myelin volume," Erickson-Owens said. "What was significantly different was the amount of iron and brain myelin volume in the babies with delayed cord clamping, which was captured by an MRI."

Myelin is a fatty substance in the brain that wraps around



URI Nursing Professor **Debra Erickson-Owens**, right, with Shoi Parker and her little boy Cameron at Women & Infants Hospital. Cameron participated in the study of delayed cord clamping with full-term infants. [Photo courtesy of URI]

all of the axons of the nerve cells. "It's an insulator and very important in the transfer of messages across the nerve cells in the brain. It's assumed that the better the myelination, the more efficient the brain processing is," said Erickson-Owens, who helped write the American College

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of Nurse Midwives Statement on Delayed Cord Clamping, and assisted in writing the guidelines on cord clamping for Women & Infants Hospital.

"The regions of the brain affected by increased myelination are those associated with motor, sensory processing/function and visual development. These are all important for early-phase development," Erickson-Owens said. "The study also obtained information from checkups, blood work for iron indices and neurodevelopmental testing."

The research project began in October 2012 and enrolled 73 healthy babies. The research team began following the infants at birth. At four months, along with other tests, the

babies had an MRI during natural sleep — naps or bedtimes. Their blood was also drawn for iron indices, including ferritin, a blood cell protein containing iron that aids in the formation of myelin. Sixty-five babies remained in the study at four months.

The Journal of Pediatrics also ran a corresponding commentary by Dr. Raghavendra Rao of the University of Minnesota's Division of Neonatology, Department of Pediatrics, and Dr. Reeta Bora of the Assam Medical College's Neonatal Unit, Department of Pediatrics, in India.

"To get the doctors' endorsement is very meaningful, especially since they were invited to write this commentary," Erickson-Owens said.

The URI researchers collaborated with Women & Infants Hospital and the Brown University Advanced Baby Imaging Laboratory. Magnetic resonance imaging from full-term, healthy babies was obtained at four months at the Brown laboratory.

"Drs. Mercer and Erickson-Owens have made many contributions to our understanding of the beneficial effects of delayed cord clamping on newborn outcomes," said

DR. JAMES PADBURY, chief of pediatrics at Women & Infants Hospital and a member of the study team. "This most recent publication shows that delayed cord clamping increases indices of iron sufficiency that are associated with increased brain myelination. This has important consequences for children born in both industrialized and in developing countries."

The hypothesis, that delayed cord clamping could have immediate and long-term benefits on healthy babies, was based on earlier research done by URI on delayed cord clamping with premature infants. Those studies found that delayed clamping in preterm infants led to better motor development than in preterm babies whose cords were clamped immediately. Erickson-Owens and Mercer theorized that the increase in iron-rich red blood cells, stem cells and blood volume found in preterm infants with delayed clamping could be found in full-term, healthy infants if the clamping of their umbilical cords was also delayed.

David Lavalley is Assistant Director, Communications and Marketing at URI.



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Care New England, Kent Hospital launch specialized program for older adults

Care New England and Kent Hospital have announced the creation of a program dedicated to providing specialized care to the state's older adult population by a team of physicians and nurses who bring a unique background in geriatric medicine and geriatrics nursing.

Patients admitted to the 10-bed Acute Care for Elders Unit (ACE) will be seen by the geriatric medicine team for a geriatric assessment including cognitive and function screening to identify needs and goals upon admission. There will be daily (Monday through Friday) care rounds led by a geriatrician and/or geriatric nurse practitioner. There will be ongoing communication of team recommendations with the patient, doctor, nurse, family, and other caregivers.

"Care New England and Kent Hospital strive every day to ensure that older adults receive access to the best care with assurance of the greatest level of patient safety and quality. The goal is to optimize hospital treatment and recovery, as well as to work with patients to define what their care goals are so that all care is patient-centered, with a focus on quality of life and maintaining independence. With this in mind, Kent Hospital has developed a team of specialized experts in geriatrics to deliver direct care and to infuse education about older adult needs and best practices for care throughout our hospital," said **ANA TUYA FULTON, MD, FACP, AGSF**, executive chief of geriatrics and palliative care at Care New England and medical director of Integra Community Care Network, LLC.

Meet the team:

ANA TUYA FULTON, MD, FACP, AGSF, is executive chief of geriatrics and palliative care at Care New England and medical director of Integra Community Care Network, LLC. Dr. Fulton is a graduate of the George Washington University School of Medicine and completed a residency in internal medicine, chief residency, and geriatric medicine fellowship at Brown University. An associate professor of medicine and associate professor of psychiatry and human behavior at The Warren Alpert Medical School of Brown University, Dr. Fulton received a Geriatric Academic Career Award from the Health Resources and Services Administration (HRSA). Dr. Fulton's major focus of clinical and academic work is on improving end-of-life and transitional care for persons with cognitive impairments. Dr. Fulton is the Care

New England site director and co-project director for the Rhode Island Geriatric Workforce Enhancement Project (RI-GWEP).

MICHAEL G. ROSS, DO, is a geriatrician and director of inpatient services at Kent Hospital. A graduate of the University of New England College of Osteopathic Medicine, Dr. Ross completed the New Hampshire Dartmouth Family Medicine Residency Program and the Maine Dartmouth Geriatric Medicine Fellowship. Specializing in geriatric and family medicine, Dr. Ross has specific clinical interest in medication management, falls prevention, and the treatment of delirium.

JULIO DEFILLO DRAIBY, MD, is trained to provide comprehensive medical care for elderly and aging patients.

Through its Comprehensive Care Program for Older Adults, Care New England provides outpatient clinical resources for older adults across most of its hospitals and organizations, including at Kent Hospital, Butler Hospital, Women & Infants, and the VNA of CNE. The ACE Unit at Kent is best equipped to meet each patient's unique needs when they must be admitted for inpatient care. The team is structured to ensure that patients have access to a broad interdisciplinary team including hospitalists, social workers, pharmacists, occupational and physical therapists, nurses, and geriatric medicine specialists.

Another goal is to help patients return to good health, preventing functional decline while in the hospital, by working with patients and caregivers to develop the best long-term approach to wellness. The team works with patients and families to create a hospital care plan that is focused on each patient's individual needs to meet the goals of care.

As a NICHE Designated Hospital (Nurses Improving Care for Health system Elders), Kent Hospital is further distinguished in its commitment to older adult care excellence and to providing patient-centered care for these patients. Kent's 16 geriatric resource nurses have completed extensive training designed around the care needs of patients age 65 and older, offering care in an environment that is geriatric friendly by making sure that patients are moving appropriately, eating well, and getting the necessary sleep for healing and recovery.

As patients age, they may experience an increased susceptibility to illness and injury. In some cases, illnesses or injuries in seniors may overlap to create complicated diagnostic and treatment processes. Dr. Defillo Draiby is trained to diagnose, treat, and manage these and any related medical situations in seniors. He currently serves as an advisor to Healthcentric Advisors, helping to optimize the management of geriatric patients through the Centers for Medicare & Medicaid Services.

MARY BETH WELESKO, MS, APRN-CNP, FNP-BC, GNP-BC, ACHPN, WCC, is a family nurse practitioner and gerontological nurse practitioner who provides medical care to geriatric patients across the continuum of health care settings. A graduate of Providence College, Rhode Island College School of

Nursing, and the Family Nurse Practitioner Program at the University of Rhode Island, Mary Beth is also a teaching associate at The Warren Alpert Medical School of Brown University. She has also earned advanced certification in hospice and palliative care

nursing and wound care, and is a member of the Hospice and Palliative Care Nurses Association and the Nurse Practitioner Association of Rhode Island.

LEYDA URUGUTIA-CANTE, BSW, is a social worker with Integra Community

Care Network and Kent Hospital. A graduate of Rhode Island College with a degree in social work, Leyda is also a certified nursing assistant and a medical assistant. Leyda has worked as an advocate for patients and their families and is fluent in both English and Spanish. ❖

Providence VA panel discusses suicide prevention efforts in the community



Dr. Nathan Stein, VA psychologist, talks about the clinical care available to help prevent Veteran suicide during the Veteran Suicide Prevention Discussion panel at the Providence VA Medical Center January 24, 2019. Other panel members, seated from left to right, are **Dr. Jennifer Barredo**, VA research health scientist, **Jeanne Smith**, Providence VAMC suicide prevention coordinator, and **Jeffrey Hill**, Rhode Island Department of Health Violence and Injury Prevention Program manager. [PROVIDENCE VA MEDICAL CENTER PHOTO BY WINFIELD DANIELSON]

The Providence VA Medical Center hosted its Veteran Suicide Prevention Discussion Panel Jan. 24, which was attended by veterans, congressional staff, state government officials, veteran service organization and other nonprofit representatives, VA clinicians and other VA staff.

Panel members **DR. NATHAN STEIN**, VA psychologist, **DR. JENNIFER BARREDO**, VA research health scientist, **JEANNE SMITH**, Providence VAMC suicide prevention coordinator, and **JEFFREY HILL**, Rhode Island Department of Health Violence and Injury Prevention Program manager, discussed ways VA can work with the community to help prevent veteran suicide.

An average of 20 veterans die by suicide each day, but 14 of those have not received recent VA care.

"We want to enroll as many at-risk veterans as possible, but we also want to equip communities to help Veterans

get the right care, wherever they need it," said **DR. SUSAN MACKENZIE**, director of the Providence VAMC. "While VA care has proven to be effective, veterans spend most of their time out in the community."

The Providence VAMC recently increased suicide prevention staff, and the team's participation in community events. Organizations interested in inviting them to participate in an event should call 401-273-7100, extension 2154.

The Mental Health Service at the Providence VAMC provides mental health care for veterans at the Providence facility and at clinics in Middletown, Rhode Island, and New Bedford and Hyannis, Massachusetts. ❖

An average of 20 veterans die by suicide each day, but 14 of those have not received recent VA care.



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The original cottage hospital, the Watson House, on Kenyon Avenue in Wakefield. John Paul Jones, MD, and his wife, Carolyn, a nurse, were the first staff members when the hospital opened in 1919 with approximately \$5,000 in funds raised by the community.

South County Health launches Centennial

On February 13, 2019, South County Health unveiled a new historical timeline installation as part of its Centennial celebration, which is on display in the South County Hospital lobby.

The event included remarks from Louis R. Giancola, President & CEO, who noted South County's evolution from its establishment as a small hospital in a cottage to a nationally-recognized leader in the delivery of quality care.

The event was attended by board members, current and former physicians and staff members, donors, partners, and volunteers. Giancola recognized those in attendance for their efforts in building a healthier community in South County and beyond.

Centennial events include a 5K Race & Walk on May 11, Golf Invitational on June 19, and Centennial Gala on September 21. ❖



South County Health welcomed guests to its Centennial kick-off on Feb. 13th. [PHOTOS: SOUTH COUNTY HEALTH]



Historical timeline of South County Health is now on display in the lobby of South County Hospital.

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Appointments

South County Health names Aaron Robinson new President/CEO



South County Health announced recently that **AARON ROBINSON** will become the organization's President/CEO starting April 1, 2019. Board of Trustees Chairman, Dennis Lynch, said that the search for a new CEO began shortly after Lou Giancola, President/CEO, announced his intent to retire in May 2018.

Mr. Robinson, who will relocate from Florida, served as CEO of Community Hospitals and was also System

Service Line Executive for Heart & Vascular services at Health First. Located in Rockledge, FL, Health First is a \$2 billion Integrated Health System of hospitals, a multi-specialty medical group, post-acute & wellness services, and a health plan. He previously served as that organization's Oncology Service Line Executive and System Vice President overseeing the Outpatient & Wellness Division.

"The Board of Trustees initiated a nationwide search for qualified candidates who possess the experience, vision and leadership qualities to sustain South County Health's reputation for high quality healthcare and exceptional patient experience," Mr. Lynch said.

Using an executive search firm experienced in the healthcare industry, over 80 applicants were vetted. The final selection was made giving full consideration of input from South County Health's Board of Trustees, donors, past board chairs, organization leadership, medical staff, and staff.

"Aaron's extensive executive-level leadership experience within community hospital settings, in combination with his energy and engaging style, distinguished him among the other highly qualified finalist candidates," Mr. Lynch said, noting Aaron's past successes in hospital operations and innovative service line development. "His enthusiasm and thoughtfulness for meeting South County Health's current and future challenges, coupled with his warmth and sense of humor is a good match for South County Health's culture of caring for the community."

Lou Giancola agrees with Mr. Lynch's confidence in Aaron's ability to lead South County Health.

"I've had the opportunity to meet with Aaron during the hiring process and was impressed by his understanding and commitment to the role of community hospitals, his commitment to sustaining our collaborative culture and his forward thinking perspective on healthcare," Mr. Giancola said. "He understands the importance of building the kind of relationships with providers and staff that are necessary to sustain the organization." ❖

Partners appoints Anne Klibanski, MD, interim CEO

BOSTON – The Partners HealthCare Board of Directors has named **ANNE KLIBANSKI, MD**, Interim President and Chief Executive Officer of Partners HealthCare. Dr. Klibanski will succeed Dr. David Torchiana, who has served since March 2015 and will retire at the end of April.



In her current role as Chief Academic Officer for Partners, a position she has held since 2012, Dr. Klibanski has leadership responsibilities spanning research, teaching and clinical activities. She leads multiple systemwide efforts aimed at clinical and educational collaboration and oversees the Partners research enterprise of more than \$1.8 billion annually. As Chief Academic Officer, Dr. Klibanski has management responsibilities for personalized medicine; Partners Clinical Trials Office; Partners Innovation, which includes commercialization and licensing; research data science/digital health and research subject protection as well as graduate medical education and continuing professional development. Dr. Klibanski is also the Chief of Neuroendocrine at MGH and is recognized internationally for her high impact research in neuroendocrine disorders and pituitary tumors.

"Anne is one of our most experienced senior leaders as well as a distinguished clinician, researcher and teacher. She has broad responsibility for many of our key missions and is a proven leader and manager of complex efforts with extensive experience overseeing large clinical and executive teams, crafting a systemwide approach to future state radiology, pathology and anesthesiology structure and investments," said Scott Sperling, Chair of the Partners Board of Directors. "Anne will work closely with hospital presidents, clinicians, researchers and administrative leadership to guide important system-wide initiatives such as *Partners 2.0*."

"We have a strong team of more than 74,000 committed employees across our system, all working to provide outstanding patient care, develop innovative health care solutions, and improve the quality of life for those living in the communities where our patients live and work," said Dr. Klibanski. "I look forward to guiding Partners through this important transition as we chart our course for Partners' future."

Dr. Klibanski received her BA, *magna cum laude* with honors in literature from Barnard College and her MD from New York University Medical Center. She is the Laurie Carrol Guthart Professor of Medicine at Harvard Medical School and an Academic Dean for Partners at Harvard Medical School. Dr. Klibanski is a recognized expert in the field of translational research focusing on rare endocrine diseases and serves on the MGH General Executive Committee, the Board of Albireo Pharmaceuticals, Scientific Advisory Board of Crinetics and the Board of Partners International.

She is an elected member of the Association of American Physicians and the American Society of Clinical Investigation; recipient of the Clinical Endocrinology Trust Medal – British Endocrine Society and the Endocrine Society Clinical Investigator Award.

The timeline for naming a permanent CEO is expected to take up to one year. ❖

Recognition



Angel Jimenez, boy who reported fire at Hasbro, honored

STATE HOUSE – The House of Representatives welcomed 7-year-old **ANGEL JIMENEZ**, the boy who alerted adults to a fire at Hasbro Children's Hospital, to the House chamber in February.

REP. GRACE DIAZ (D-Dist. 11, Providence) welcomed Angel, who lives in her district, along with his mother and uncle. "Heroes come in every size, every color and every ethnicity," said Representative Diaz on the House floor. "But you never expect that a 7-year-old boy would be alert, be ready to notify adults of a situation that could have a tragic impact on so many people. If he hadn't sounded the alarm when he did, firefighters said it could have been devastating."

Angel was visiting his little brother, who was a patient at the hospital, on Jan. 15 when he witnessed and alerted adults to a fire on the rooftop of one of the hospital's buildings. Because of the quick alarm, firefighters were able to have the fire under control within 10 minutes of arriving at the scene.

Providence **MAYOR JORGE ELORZA** presented him with a citizen's citation and Public Safety Commissioner Steven Pare called Angel a hero. ❖

Stroke Center at Kent earns joint commission certification

The Advanced Primary Stroke Center at Kent Hospital has earned The Joint Commission's Gold Seal of Approval® and the American Heart Association/American Stroke Association's Heart-Check mark for Advanced Certification for Primary Stroke Centers. Joint Commission experts evaluated compliance with stroke-related standards and requirements, including program management, the delivery of clinical care, and performance improvement.

"Kent Hospital's dedicated team of professionals is committed to providing outcome-oriented, exceptional stroke care to our communities," said **SUSAN MOORE**, the Stroke Center's nurse director. "The stroke program continues to evolve, using evidence-based recommendations and quality assessment and reporting." ❖

William Chen, MD, named Fellow of the American Gastroenterological Association

WILLIAM CHEN, MD, of University Gastroenterology, has been named Fellow of the American Gastroenterological Association (AGA), the nation's oldest medical society dedicated to disorders of the gastrointestinal (GI) tract. Through the fellowship program, AGA honors superior professional achievement in clinical private or academic practice and in basic or clinical research. Fellowships are awarded to AGA members whose accomplishments and contributions demonstrate personal commitment to the field of gastroenterology. Dr. Chen joins University Gastroenterology's Dr. Thomas Sepe and Dr. Peter Margolis who are also Fellows of the American Gastroenterological Association.

David A. Lieberman, MD, AGAF, AGA Institute President, stated, "The American Gastroenterological Association is proud to announce the 2019 inductees for the AGA Fellowship program, which acknowledges AGA members with superior professional achievement in the field of gastroenterology with fellowship within our organization. We are proud of those members who have been recognized by their peers and community as being at the forefront of our field." ❖



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Obituaries

LOUIS ANTHONY COLANTONIO, MD, 76, of Cumberland passed away unexpectedly on February 2, 2019. He was the husband of 53 years to Jo-Ann (Stubbs).




Louis was a 1960 Graduate of LaSalle Academy, 1964 graduate of Providence College and received his medical degree from the University of Bologna, Italy. He was the first physician at Rhode Island Hospital to complete a straight 3-year Pediatric internship/residency. He was on the staff of Rhode Island Hospital, Hasbro Hospital, and Women and Infants.

Louis had a thriving pediatric practice in northern Rhode Island for 45 years and touched the lives of many families with his attention to detail and genuine care for the wellbeing of all the children who came to see him. He left a special mark on the community that will not soon be forgotten.

Louis loved Italy and anything Italian. He shared this affinity with all around him and loved to tell stories about when he and Jo-Ann lived there with no money during medical school in the '60s and how they were the best years of their lives.

He is survived by his loving children David Colantonio, Esq. and Marisa Bettencourt and her husband, David. He was the beloved Nonno to his three grandsons, Andrew, Joseph, and David, Jr., of whom he was very proud. He is also survived by his brother Gaetano (Susan), and sister Carmella (Steve), as well as numerous nieces, nephews, cousins, and friends both in the US and Italy. Louis was a humble and loyal man who lived his life with intention and love for his family, friends, and patients. He will be deeply missed. ❖

 **RICHARD E. LAND, MD**, 89, died February 13, 2019 at home. He was the beloved husband of Francine (Finck) Land for 63 years. Born in Brooklyn, NY, a son of the late Maurice and Jeannette (Warshaw) Land, he was a longtime resident of Cranston.

He was the Director of Radiology for 30 years at St. Joseph & Fatima Hospitals in Providence, retiring in 2003, and was previously a radiologist at Mass General Hospital. Richard was a Captain and Director of Radiology in the US Army, serving in Ft. Leavenworth, KS.

He graduated from James Madison High School, Class of '47, attended NYU, and graduated from Northwestern University with a BS and MD.

Richard was an accomplished classical pianist and was a performing member of the Chopin Club and Henschel Club. He loved dogs, telling jokes, and spending time with his family.

He was the devoted father of Susan Land (Mark Goodman), Robert Land and William Land, MD (Margaret Seif) and loving grandfather of Jeremy Land Goodman, Sasha Land and Zoe Land. ❖



A. LOUIS MARIORENZI, MD, 87, of Jamestown, RI, passed away peacefully at his home on February 20, 2019. He is survived by his beloved wife of 64 years, Grace



Mary (Vallone) Mariorenzi; his children, Louis Mariorenzi, MD, and his wife Priscilla Szeke, Michael Mariorenzi, MD, and his wife Maria Lee Mariorenzi, Maria Barone and her husband Anthony Barone, MD, Lisa Musco and her husband Paul Musco, MD, and Christina Hinton; and his 12 grandchildren, and his great-granddaughter.

Lou graduated from La Salle Academy, Providence College and Georgetown University School of Medicine. He completed his internship at St. Joseph's Hospital, surgical residency in Boston, and orthopedic training at Walter Reed Medical Center followed by subspecialty training in hand surgery. After his service commitment at Eglin Air Force Base, FL where he was chief of orthopedics, Lou returned to Rhode Island in 1964 to launch his career in private practice. His practice grew exponentially over the years to become Orthopaedic Associates, Inc. He served as chief of orthopedics at St. Joseph's Hospital and Our Lady of Fatima Hospital. Throughout the 1960s, 70s and 80s, Lou pioneered multiple new orthopedic procedures and was one of the first to perform knee and hip joint replacement surgery in Rhode Island after receiving special approval by the FDA. He later introduced and advanced arthroscopic surgery in Rhode Island and internationally during the late 1970s and early 80s.

He was a fellow of the American Academy of Orthopaedic Surgeons, the Arthroscopy Association of North America, the International Society of Orthopaedic Surgeons, and a founding member of the International Society of Aquatic Medicine.

While Lou loved his work and was especially proud to work alongside his sons and other respected colleagues as the practice grew, his truest devotion was to his family and friends. He was a guiding light in the lives of his children and grandchildren through every stage and humbly unaware that his greatest impact was simply leading by his extraordinary example of a life well-lived. Approachable, open-minded, and willing to listen, he gently guided and was the steadfast go-to for so many who sought his caring insight, ability to keep perspective, and sprinkling of humor when needed. Lou was genuinely interested in learning from every walk of life and was like a father or brother to so many friends and colleagues. He had many passions and introducing and enjoying them with others brought him great joy. Generations of family and friends were inspired and will carry on his love of skiing, boating on Narragansett Bay, quahogging, summer cookouts, and his taste for classic and exotic cars.

While his passing leaves an unimaginable void, his legacy will continue through all those he has touched, taught and inspired. ❖

DIANA MONACO, MD, 81, of Cranston passed away on February 20, 2019. She was the dear sister of Alfred Monaco, Jr. and his wife Joyce of Cranston and the late Barbara C. Monaco; loving aunt of Gina DiGregorio and her husband Pasquale of Cranston and cherished great aunt of Sofia DiGregorio.

In lieu of flowers memorial contributions may be made to: Hope Hospice & Palliative Care Rhode Island, 1085 North Main St. Providence, RI 02904.